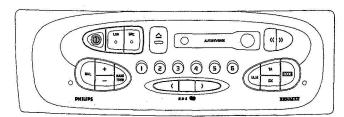
Service Service Service

22DC594/62F/62L



For repair information of the Cassette deck see Service Manual No 4822 725 xxxxx of Auto Cassette Deck CDS101Y

12 V 🔾

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Subject to modification

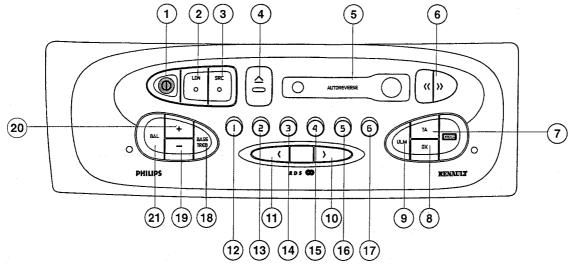


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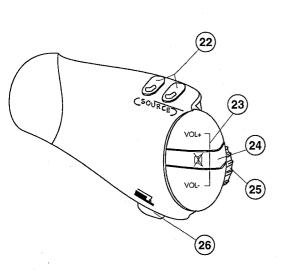


Front



POS	22DC593/62L	22DC594/62F	22DC594/62L							
1	On / Off									
2		Loudness								
3		Source								
4		Eject button								
5		Cassette opening + flap								
6		FRW - FFW Buttons								
7		Info / Traffic announcement								
8		DX Mode								
9		Band Select								
10	Searc	ch UP	Search UP / Next track							
11	Search	DOWN	Search DOWN / Previous track							
12	Pres	set 1	Preset 1 / Scan / Disk 1							
13	Pres	set 2	Preset 2 / Scan / Disk 2							
14		set 3	Preset 3 / Scan/ Disk 3							
15		set 4	Preset 4 / Scan / Disk 4							
16	Preset 5	Preset 5 / MSS	Preset 5 / MSS / Scan / Disk 5							
17	Preset 6	Preset 6 / Dolby	Preset 6 / Dolby / Scan / Disk 6							
18		Bass / Treble								
19	Vol , Bass, Treble, Balance -	Vol , Bass, Treble, Balance, Fader -								
20	Vol , Bass, Treble, Balance +	Vol , Bass, Treble, Balance, Fader +								
21	Balance	Balan	ce / Fader .							

Remote control



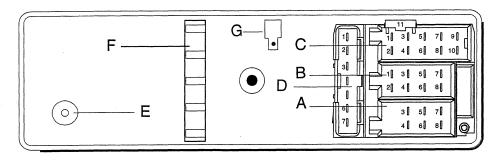
22	Change waveband/source							
23	Vol , Bass, Treble, Balance, Fader + and - when corresponding function activated							
24	In code entry mode: SP : Validation digit Sec Code LP : Validation Sec Code	All others modes: Mute / Demute						
25	In code entry mode: Selection digits Sec Code	Changing preset / Track selection						
26	In code entry mode: SP : Validation digit Sec Code LP : Validation Sec Code	In radio mode: SP : search UP LP : Starts Autostore						

SP : Short press

LP: Long press (>2s)

22DC593/62L 22DC594/62L 22DC594/62F

CONNECTIONS



POS	FUNCTION	DC593/62L	DC594/62F	DC594/62L
A1				
A2				
A3	Mute radio (0V)	X	X	X
A4	Plus permanent	X	X	X
A5	+ Antenna	X	X	Х
A6	Pilot light	X	X	Х
A7	Plus accessories	X	X	Х
A8	GND	X	X	Х
D4	Door right I		X	X
	Rear right +		X	X
B2	Rear right -	X	X	X
B3	Front right +	X	X	X
B4 B5	Front right - Front left +	X	X	X
	Front left -	$\frac{\lambda}{X}$	$\frac{\hat{x}}{x}$	X
B6 B7	Rear left +	^	X	$\frac{\lambda}{x}$
	Rear left -		X	X
B8	Rear left -			<u> </u>
C1	Screening D2B			X
C2	Bus D2B +			X
СЗ	Bus D2B -			X
C4	GND supply			Х
C5	CD supply (A4)			X
C6				
C7	Info on / off (A5)			Х
C8				X
C9	Input left			X
C10	Input ref			X
C11				Х
D1	Data I2C	X	X	X
D2	Clock I2C	X	X	X
D3	Mrq I2C	Х	X	X
D4				
D5				
D6	+ antenna	X	X	X
D7	GND	X	X	X
E	AERIAL PLUG	X	X	X
	Factoring colds	X	X	X
F	Fastening cable	, A	^	. ^

TECHNICAL DATA

GENERAL

Power supply Dimensions :14.4V DC :180x150x51 mm

: 153-279 KHz

: 531-1602 KHz

Security code : Yes
Remote control : Yes
Remote display : Yes

note display :

RADIO

LW MW FM

FM : 87.5-108 MHz
IF-AM (1/2) : 10.7 MHz/450 KHz
IF-FM (1/2) : 72.2 MHz/10.7 MHz
Sensivity 26dB S/N : <40 μV (LW)

 $(2005)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$: $(200)^{1/4}$

Limitation α -3dB : 3μ V<L<14 μ V

CASSETTE

Cassette mechanism : CDS101-Y Number of tracks : 2x2

Tape speed : 4.76 cm/secWow and flutter : $\leq 0.35\%$ Crosstalk : $\geq 30 \text{ dB}$

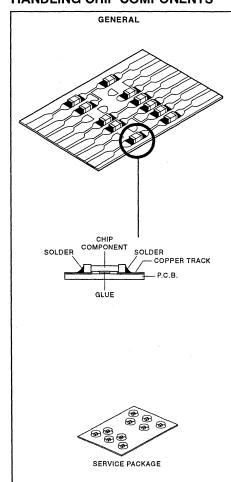
AMPLIFIER

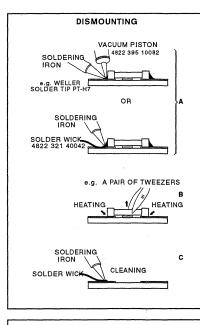
Output power : $4x15 \text{ W} / 4 \Omega$ (THD = 10%) DC594 : $2x6\text{W} / 4 \Omega$ (THD = 10%) DC593

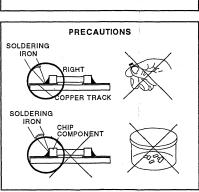
Fader control : >12 dB (DC594 only)

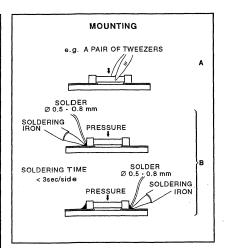
Balance control : >15 dB
Source separation : >60 dB
Input sensivity (CD in) : 150 mV ± 2 dB

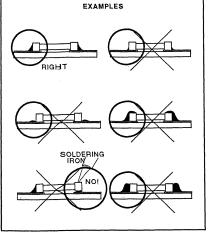
HANDLING CHIP COMPONENTS







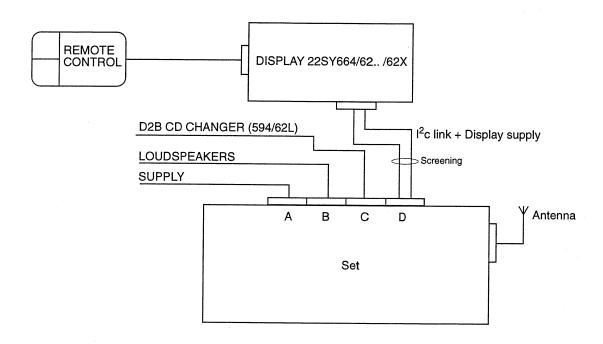




These sets are parts of a system, composed of the following parts:

- 1)- The set 22DC593/62L, 594/62L or 594/62F.
- 2)- A remote control + cable.
- 3)- A remote display 22SY664/62 or 62X.
- 4)- A cable link between the set (connector D) and the display.

-IN CASE YOU NEED PARTS OF THIS SYSTEM, PLEASE CONTACT LOCALLY RENAULT TO GET INFO ABOUT THESE PARTS.



This set is protected by a security code. THE CODE CAN ONLY BE ENTERED VIA THE REMOTE CONTROL.

Entering the code:

- -) Press the On/Off key to switch on the set. COD and then 0000 will appear on the display.
- -) To select the four digits of the code:
- Adjust the flashing digit with the thumbwheel on the remote control.
- Press the [24] key or 26] key on the remote control to change the digit.
- -) Press the [24] key or [26] key for at leasr 2 seconds to validate the code. When the code is activated a bleep will be heard.

Example: you want to enter the code 7637

	Turn the thum-	Turn the thum-	Turn the thum-	Turn the thum-	Press [24] or
	bwheel	bwheel	bwheel	bwheel	[26] for at
	Press [24] or	Press [24] or	Press [24] or	Press [24] or	least 2
	[26]	[26]	[26]	[26]	seconds
0000	7000	7600	7630	7637	Last heard fre- quency

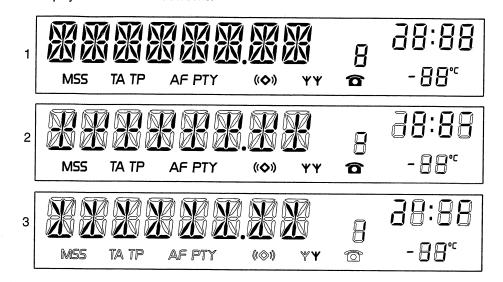
SYSTEM TESTS

WARNING: this test needs a display 22SY656/62B to be completed

1 - Display connection check

Starting the test: supply the display with the 12V acc without radio connected or radio switched off while <Vol+>sat, <Vol->sat and <SOURCE>sat are pressed together.

If there is no problem, the following test will start. The display shows 3 different screens:



These screens are displayed in sequence each time you press the <26>sat button. It can be aborted by Switching On the set.

2 - Keyboard test

Starting the test: press P3 and ON.

"T" is displayed to request keyboard test. For each key pressed, the number of the pressed key appears, according to the table shown below. When all 17 keys have been pressed, "TEST OK" message is displayed.

This test can be aborted at any time by switching the set OFF.

number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
key	LDN	BAL FAD	+	-	BAS TRE	Pr 1	Pr 2	Pr 3	Pr 4	Pr 5	Pr 6	ULM	TA	DX	SRC	<	>

If all is right, thr display shows "KEYS OK"

3 - Check sum and Running times (Multiples of ten minutes)

At the end of the keyboard test, press P3 to start this test. The display will show in order, during 5s each:

1) the checksum of the front microprocessor:	CSF	027B
2) the checksum of the main microprocessor:	CSM	C0BC
3) the running time in tuner mode:	TU	
4) the running time in cassette mode:	TA	
5) the running time in Cd changer mode	CDC	
6) the running time in Traffic Announcement	TR	
7) the running time in Telephone Call	SP	
8) the total running time	TOT	
9) the running time in nominal mode I ² C	NOM	

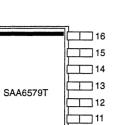
These indications are displayed in a loop. To end the test, switch Off the set.

22DC593/62L 22DC594/62F 22DC594/62L

INTEGRATED CIRCUITS

SAA6579T Radio Data System demodulator

SYMBOL	PIN	DESCRIPTION	
QUAL	1	quality indication output	
RDDA	2	RDS data output	-
V _{ref}	3	reference voltage output (0.5 V _{DDA})	1 🖂
MPX	4	multiplex input signal	2
V _{DDA}	5	+5V supply voltage for analog part	3 🗔
V _{SSA}	6	ground for analog part (0V)	4
CIN	7	subcarrier input to comparator	5 🖂
SCOUT	8	subcarrier output for reconstruction filter	6 🖂
TCTR	9	test control	7 🖂
TEN	10	test enable	8 🖂
V _{SSD}	11	ground for digital part (0V)	L
V_{DDD}	12	+5V supply voltage for digital part	
OSCI	13	oscillator input	
osco	14	oscillator output	
T57	15	57kHz clock signal output	
RDCL	16	RDS clock output	

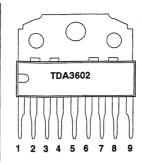


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9

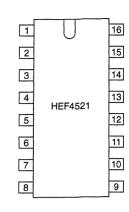
TDA3602 Multiple output voltage regulator

SYMBOL	PIN	DESCRIPTION
V _P	1	positive supply voltage
REG1	2	regulator 1 output
RESET	3	reset output
SCI	4	state control input
HOLD	5	hold output
GND	6	ground
REG3	7	regulator 3 output
V _{bu}	8	back-up
REG2	9	regulator 2 output



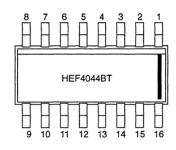
HEF4521BP 24-stage frequency divider

SYMBOL	PIN	DESCRIPTION
024	1	output 2 ²⁴
MR	2	asynchronous master reset
V _{SS'}	3	
02	4	
V _{DD'}	5	
l ₂	6	
01	7	
V _{SS}	8	ground
11	9	
O ₁₈	10	output 2 ¹⁸
O ₁₉	11	output 2 ¹⁹
O ₂₀	12	output 2 ²⁰
0 ₂₁	13	output 2 ²¹
022	14	output 2 ²²
0 ₂₃	15	set input 3 (active LOW)
V _{DD}	16	power supply



HEF4044BT Quad R/S latch with 3-state outputs

SYMBOL	PIN	DESCRIPTION
Ο ₃	1	3-state buffered latch output 3
n.c	2	
<u>s</u> 0	3	set input 0 (active LOW)
\overline{R}_0	4	reset input 0 (active LOW)
E0	5	common output enable input
R ₁	6	reset input 1 (active LOW)
Ī5₁	7	set input 1 (active LOW)
V _{SS}	8	ground
01	9	3-state buffered latch output 1
02	10	3-state buffered latch output 2
S ₂	11	set input 2 (active LOW)
\overline{R}_2	12	reset input 2 (active LOW)
00	13	3-state buffered latch output 0
R ₃	14	reset input 3 (active LOW)
S̄₃	15	set input 3 (active LOW)
V_{DD}	16	supply



FUNCTION TABLE

	inputs	output				
E0	\overline{S}_n	R̄n	O _n			
L	Х	Х	Z			
Н	L	Н	Н			
Н	Х	L	L			
Н	Н	latched				
Z = high impedance OFF-state						

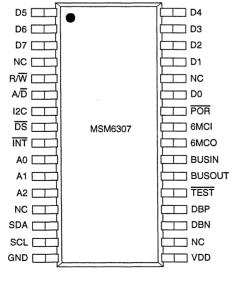
TEA6320 SOFAC (SOund FAder Control circuit)

SY	MBOL	PIN	DESCRIPTION	SYMBOL	PIN	DESCRIPTION
	SDA	1	serial data input/output	IAR	17	input A right source
	GND	2	ground	IBR	18	input B right source
	OUTLR	3	output left rear	CAP	19	electronic filtering for supply
	OUTLF	4	output left front	ICR	20	input C right source
	TL	5	treble control capacitor left channel or input from an external equalizer	V _{ref}	21	reference voltage (0.5Vcc)
	B2L	6	bass control capacitor left channel or output to an external equalizer	IDR	22	input D right source
	B1L	7	bass control capacitor, left channel	QSR	23	output source selector right channel
	IVL	8	input volume I, left control part	ILR	24	input loudness right channel
-	ILL	9	input loudness, left control part	IVR	25	input volume I, right control part
	QSL	10	output source selector, left channel	B1R	26	bass control capacitor, right channel
	IDL	11	input D left source	B2R		bass control capacitor right channel or output to an external equalizer
	MUTE	12	mute control	TR	28	treble control capacitor right channel or input from an extenal equalizer
	ICL	13	input C left source	OUTRF	29	output right front
	IMO	14	input mono source	OUTRR	30	output right rear
	IBL	15	input B left source	Vcc	31	supply voltage
	IAL	16	input A left source	SCL	32	serial clock input

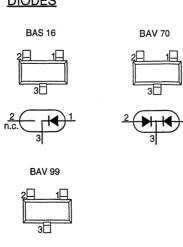
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	TEA6320	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17

MSM6307GS D2B IC

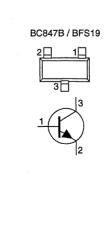
SYMBOL	1/0	DESCRIPTION
POR	ı	Power on - reset
R/W	1	Read / Write selector
DS	1	Data strobe to access data bus
A/D	ı	Selects address or data on D0 ~ d7
SDA	1/0	I ² C data signal input / output
SCL	1/0	I ² C clock signal input / output
12C	ı	Selects I ² C or parallel interface
ĪNT	0	Interrupt output
BUSIN	1	D2B input (TTL level)
BUSOUT	0	D2B output (TTL level)
DBN & DBP	I/Os	Differential D2B lines of the internal driver/ receiver, to be terminated with 60Ω
TEST	1	Selects the test mode for factory purposes
6MCI	ı	Clock input 6MHz resonator or X-TAL
6MCO	0	Clock output 6MHz resonator or X-TAL
D0 ~ D7	I/Os	8-bit bi-directional address or data bus
A0 ~ A2	ı	Programmables I ² C slave addresses



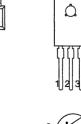
DIODES



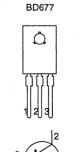
TRANSISTORS

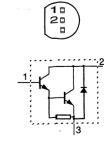






BD438





BC875

DC VOLTAGES

All measurements in FM, set tuned, 0dB at output.
All settings in mid position. Values are given for indication only.

IC91 TUNER MODULE 1 = 0.5 V 2 = GND 3 = N.C. 4 = N.C. 5 = N.C. 6 = 4.9 V 7 = 8.3 V 8 = GND 9 = 4.9 V 10 = 4.6 V	11 = 2.9 V 12 = 4.7 V 13 = 4.9 V 14 = 4.8 V 15 = N.C. 16 = 3.6 V 17 = 3.6 V 18 = 0.0 V 19 = N.C. 20 = N.C.	7251 TEA0675T 1 = 4.0 V 2 = 3.4 V 3 = 3.9 V 4 = 3.9 V 5 = 3.9 V 6 = 5.6 V 7 = 4.0 V 8 = 4.0 V 9 = 8.2 V 10 = 3.6 V 11 = 4.0 V 12 = 4.0 V	13 = 4.0 V 14 = GND 15 = N.C. 16 = GND 17 = 4.0 V 18 = 4.0 V 19 = 4.5 V 20 = 3.9 V 21 = 0.6 V 22 = 3.4 V 23 = 3.0 V 24 = 4.0 V
1 = 1.8 V 2 = 7.3 V 3 = 2.1 V 4 = N.C. 5 = GND	6 = 5.0 V 7 = N.C. 8 = N.C. 9 = 8.5 V	7601 ST24C16 1 = 5.0 V 2 = 5.0 V 3 = 5.0 V	5 = 5.0 V SDA 6 = 5.0 V SCL 7 = GND
7350 TDA8579T 1 = 4.8 V 2 = 5.0 V 3 = 4.8 V 4 = 5.2 V	5 = GND 6 = 4.4 V 7 = 4.4 V 8 = 8.5 V	4 = GND 7602 HEF4521 1 = N.C. 2 = GND 3 = GND	8 = 5.0 V 9 = 2.5 V 10 = 1 Hz 11 = N.C.
7354 TEA6320 1 = 5.0 V 2 = GND 3 = 3.6 V	17 = 3.7 V 18 = 3.9 V 19 = 7.6 V	4 = 3.5 V 5 = 5.0 V 6 = 3.5 V 7 = 3.5 V. 8 = GND	12 = N.C. 13 = N.C. 14 = N.C. 15 = N.C. 16 = 5.0 V
4 = 3.9 V 5 = 3.9 V 6 = 3.9 V 7 = 3.9 V 8 = 3.5 V 9 = 3.8 V 10 = 3.7 V 11 = N.C. 12 = 7.6 V 13 = 4.4 V 14 = 3.8 V 15 = 3.9 V 16 = 3.6 V	20 = 4.4 V 21 = 3.9 V 22 = N.C. 23 = 3.7 V 24 = 3.8 V 25 = 3.5 V 26 = 3.9 V 27 = 3.9 V 28 = 3.9 V 29 = 3.9 V 30 = 3.9 V 31 = 7.6 V 32 = 5.0 V	7603 MSM6307GS 1 = 5.0 V 2 = 5.0 V 3 = 5.0 V 4 = N.C. 5 = 5.0 V 6 = 5.0 V 7 = 5.0 V 9 = 5.0 V 10 = 5.0 V 11 = 5.0 V	17 = 5.0 V 18 = N.C. 19 = 2.3 V 20 = 2.3 V 21 = 5.0 V 22 = N.C. 23 = 5.0 V 24 = 5.75 MHz 25 = 5.75 MHz 26 = 4.8 V 27 = 5.0 V
7355 SAA6579T 1 = N.C. 2 = 3.1 V 3 = 2.5 V	9 = GND 10 = GND 11 = GND	13 = N.C. 14 = 4.9 V SDA 15 = 4.9 V SCL 16 = GND	28 = N.C. 29 = 5.0 V 30 = 5.0 V 31 = 5.0 V 32 = 5.0 V
4 = 2.5 V 5 = 4.9 V 6 = GND 7 = 2.3 V 8 = 2.5 V 7356 TL074	12 = 4.9 V 13 = 4.332 MHz 14 = 4.332 MHz 15 = N.C. 16 = 3.5 V	7800 TDA3602 1 = 13.4 V 2 = 8.5 V 3 = N.C. 4 = 0.6 V 5 = 5.0 V	6 = GND 7 = 5.0 V 8 = 13.2 V 9 = 5.0 V
1 = 4.2 V 2 = 4.2 V 3 = 4.1 V 4 = 8.2 V 5 = 4.1 V 6 = 4.3 V 7 = 4.2 V	8 = 4.2 V 9 = 4.3 V 10 = 4.1 V 11 = GND 12 = 4.2 V 13 = 4.2 V 14 = 4.2 V	7826 HEF 4044BT 1 = 0.0 V 2 = N.C. 3 = 3.5 V 4 = 4.6 V 5 = 5.0 V	9 = 5.0 V 10 = 0.0 V 11 = 4.8 V 12 = 5.0 V 13 = 5.0 V
7551 TDA7374 1 = 7.0 V 2 = 7.0 V 3 = 14.4 V 4 = 0.7 V 5 = 0.7 V 6 = 0.7 V 7 = 3.3 V 8 = Earth	9 = GND 10 = 0.0 V 11 = 0.7 V 12 = 0.7 V 13 = 14.4 V 14 = 7.0 V 15 = 7.0 V	6 = 4.0 V 7 = 5.0 V 8 =GND	14 = 5.0 V 15 = 5.0 V 16 = 5.0 V

PCS 87 790 ⁶

Check and Alignment

No alignment is needed for radio part. IC91 tuner is pre-aligned.

For all measurement, please refer to "General Check & Alignment procedures for Car Systems' 4822 725 25456

Dolby alignment:

cassette	adjust	
MTT 150 F = 400 Hz/ 200 nWb	3260 and 3261	AC voltage at pin 1 & 24 of 7251 = 387.5 mV +/- 50mV

Checks:

Supply voltages (set Off)

SET OFF	Voltage	Current + Acc ON	Current + Acc OFF	Pin 14 μP	Pin 69 μP
Acc supply	+14.4V	< 20mA		min 4.8V	max 0.8V
Perm supply	+14.4V	< 3mA	< 3mA	max 5.2V	max 0.0 V

Supply voltages (set On)

device	μΡ	μΡ	μΡ	TDA3602	TDA3602	EEprom
pin	30 (reset)	14 (supply)	69 (hold)	9 (5V)	2 (8.5V)	8
Voltage	max 0.8V	min 4.8V max 5.2V	min 2.0V max 5.7V	min 4.8V max 5.2V	min 8.2V max 8.8V	min 4.8V max 5.2V

Reference oscillator frequencies

device	MSM 6307	μΡ	SAA6579T
pin	24 & 25	51 & 52	13 & 14
frequency	6 MHz 0.5%	11.5 MHz 0.5%	4.332 MHz 60 ppm

FM mute:

98 MHz 1mV	output at load resistor R & L = 775 mV = REF
no signal	output should be < -20 dB (REF - 20 dB)

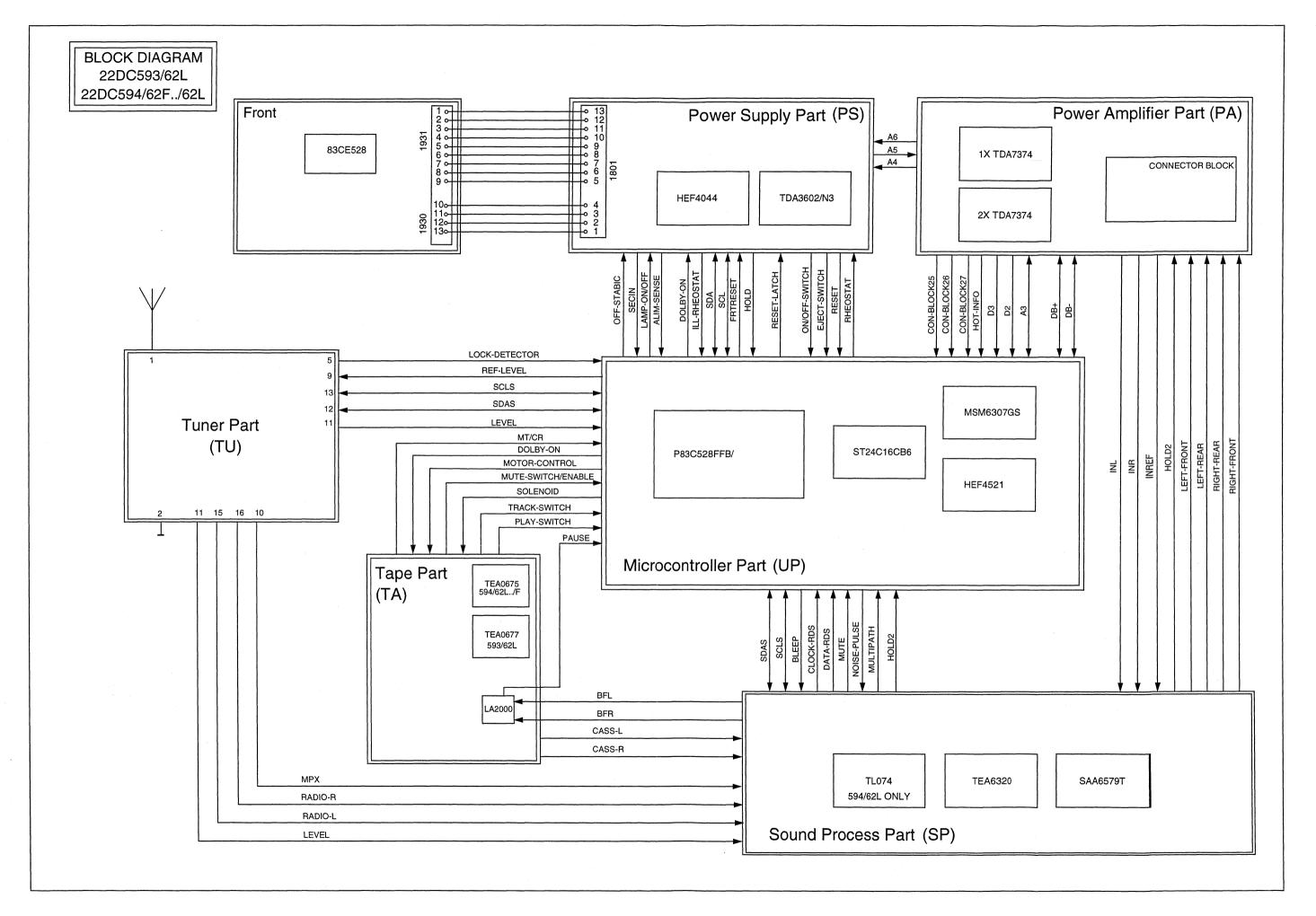
Demodulated FM levels

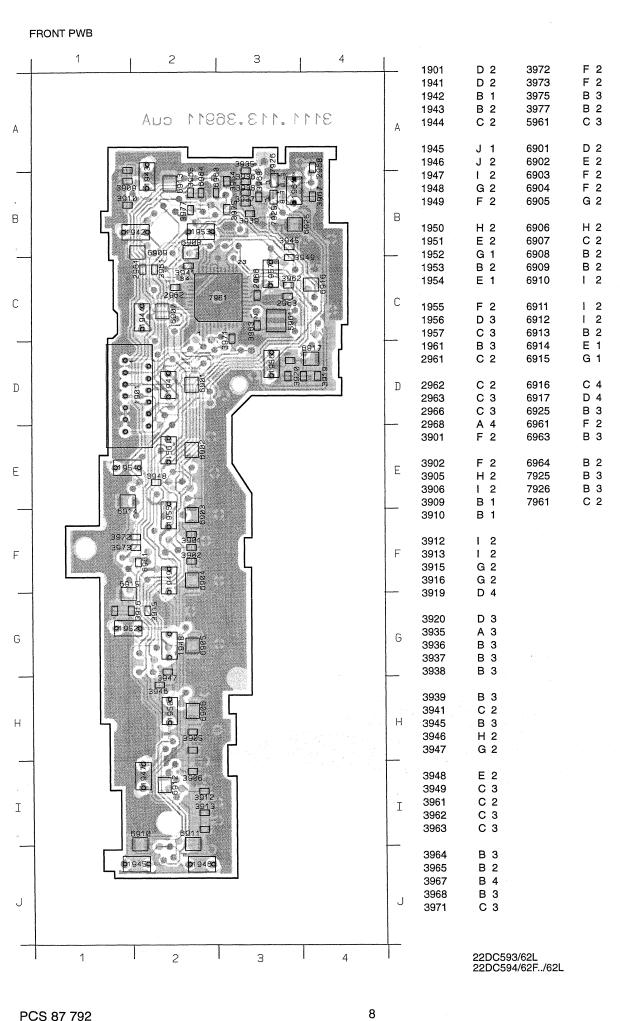
Input		Output of IC91 (pin 16 & 17)
98 MH	z	300 mV \pm 50 mV

Limiting point α-3dB

Range	Input	min	nominal	max
87.5 to 108 MHz	1mV 400Hz	ЗμV	5.5μV	14μV

2D**C**593/62L 2D**C**594/62F../62L

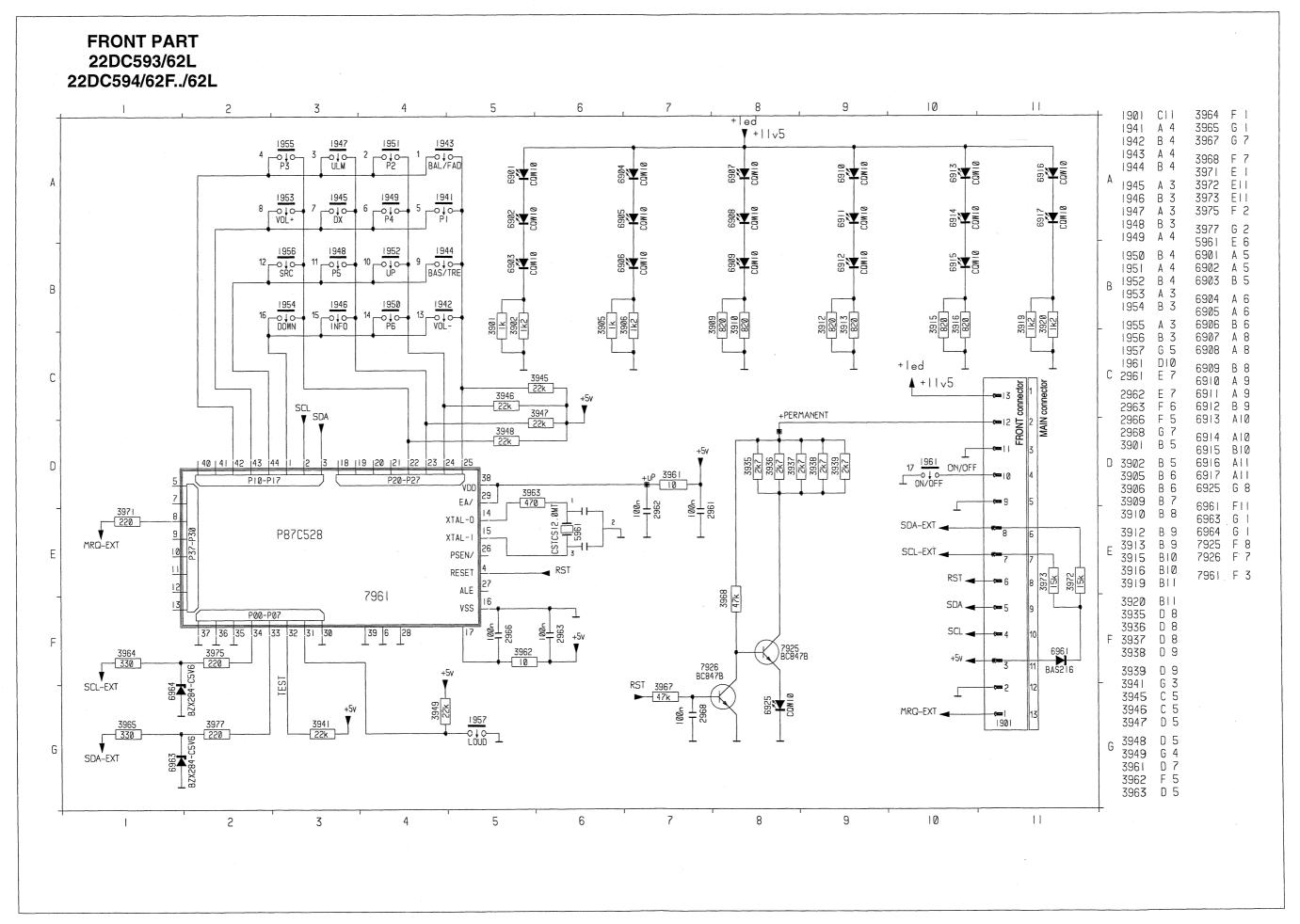




1942 4822 276 13103 SWITCH 6901 4822 130 10417 LED S 1943 4822 276 13103 SWITCH 6902 4822 130 10417 LED S 1944 4822 276 13103 SWITCH 6903 4822 130 10417 LED S 1945 4822 276 13103 SWITCH 6904 4822 130 10417 LED S 1946 4822 276 13103 SWITCH 6905 4822 130 10417 LED S 1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S	RES 12MHZ M LOT670-JK-E9139 M LOT670-JK-E9139
1942 4822 276 13103 SWITCH 6901 4822 130 10417 LED S 1943 4822 276 13103 SWITCH 6902 4822 130 10417 LED S 1944 4822 276 13103 SWITCH 6903 4822 130 10417 LED S 1945 4822 276 13103 SWITCH 6904 4822 130 10417 LED S 1946 4822 276 13103 SWITCH 6905 4822 130 10417 LED S 1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S	M LOT670-JK-E9139
1943 4822 276 13103 SWITCH 6902 4822 130 10417 LED S 1944 4822 276 13103 SWITCH 6903 4822 130 10417 LED S 1945 4822 276 13103 SWITCH 6904 4822 130 10417 LED S 1946 4822 276 13103 SWITCH 6905 4822 130 10417 LED S 1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S	
1944 4822 276 13103 SWITCH 6903 4822 130 10417 LED S 1945 4822 276 13103 SWITCH 6904 4822 130 10417 LED S 1946 4822 276 13103 SWITCH 6905 4822 130 10417 LED S 1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S 6906 4822 130 10417 LED S	M LOT670-JK-E9139
1944 4822 276 13103 SWITCH 6903 4822 130 10417 LED S 1945 4822 276 13103 SWITCH 6904 4822 130 10417 LED S 1946 4822 276 13103 SWITCH 6905 4822 130 10417 LED S 1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S	
1945 4822 276 13103 SWITCH 6904 4822 130 10417 LED S 1946 4822 276 13103 SWITCH 6905 4822 130 10417 LED S 1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S 6906 4822 130 10417 LED S	M LOT670-JK-E9139
1946 4822 276 13103 SWITCH 6905 4822 130 10417 LED S 1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S	M LOT670-JK-E9139
1947 4822 276 13103 SWITCH 6906 4822 130 10417 LED S	W E0 10,0 010 E0 100
1047 402270 10100 041101	M LOT670-JK-E9139
1000 10010 10010	M LOT670-JK-E9139
	M LOT670-JK-E9139
1010	M LOT670-JK-E9139
1040 4022 270 10100 000111011	M LOT670-JK-E9139
1950 4822 276 13103 SWITCH 6909 4822 130 10417 LED S	M FO 1010-2K-E9139
1951 4822 276 13103 SWITCH 6910 4822 130 10417 LED S	M LOT670-JK-E9139
100 100 100 100 100 100 100 100 100 100	M LOT670-JK-E9139
1002 1022 270 10700	M LOT670-JK-E9139
1000 4022 270 10100 00011	
1904 4022 270 10100 01111011	M LOT670-JK-E9139
1955 4822 276 13103 SWITCH 6914 4822 130 10417 LED S	M LOT670-JK-E9139
4050 4000 070 40400 CIMITOU 6015 4922 130 10417 LED S	M LOT670-JK-E9139
1000 TOLE 270 10100 CWITCH	M LOT670-JK-E9139
1957 4022 270 10100 0011011	
1001 4022 270 10100 01111011	M LOT670-JK-E9139
	M LOT670-JK-E9139
-1 - 6961 4822 130 83757 DIODE	BAS216
2961 4822 126 13196 100nF 10% 25V X7R 0805 6062 4822 130 10185 DIODE	REG SM UDZ5.6B
4000 4000 4000 4000 4000 4000 4000 400	
2962 4822 126 13196 100hF 10% 25V X/R 0805 6964 4822 130 10185 DIODE 2963 4822 126 13196 100hF 10% 25V X/R 0805	REG SM UDZ5.6B
1000 100 10100 10	
2900 4622 120 13190 100111 10 % 23V X/11 0003 4K)	
2300 4022 120 10130 100111 1070 237 X711 0000	, _D
7925 4822 130 60511 BC847 7926 4822 130 60511 BC847	
	528EFB/017
3901 4822 051 20102 1KΩ 5% RC11 0805	
3902 4822 051 20122 1KΩ 5% RC11 0805	
3905 4822 051 20102 1KΩ 5% RC11 0805	1
3906 4822 051 20122 1K2 5% RC11 0805	
3909 4822 051 20821 820Ω 5% RC11 0805	
3910 4822 051 20821 820Ω 5% RC11 0805	
3912 4822 051 20821 820Ω 5% RC11 0805	
3913 4822 051 20821 820Ω 5% RC11 0805	
3915 4822 051 20821 820Ω 5% RC11 0805	
3916 4822 051 20821 820Ω 5% RC11 0805	
3919 4822 051 20122 1K2 5% RC11 0805	
3920 4822 051 20122 1K2 5% RC11 0805	
3935 4822 051 20272 2K7 5% RC11 0805	
3936 4822 051 20272 2K7 5% RC11 0805	*
3937 4822 051 20272 2K70 5% RC11 0805	
3938 4822 051 20272 2K7 5% RC11 0805	
3939 4822 051 20272 2K7 5% RC11 0805	
3941 4822 051 20223 22KΩ 5% RC11 0805	
3945 4822 051 20223 22KΩ 5% RC11 0805	
3946 4822 051 20223 22KΩ 5% RC11 0805	
3947 4822 051 20223 22KΩ 5% RC11 0805	
3948 4822 051 20223 22KΩ 5% RC11 0805	
3949 4822 051 20223 22KΩ 5% RC11 0805	
3961 4822 051 20109 10Ω 5% RC11 0805	
3962 4822 051 20109 10Ω 5% RC11 0805	
4000 054 00474 4700 527 5044 0005	
3963 4822 051 20471 470Ω 5% RC11 0805	
3964 4822 051 20331 330Ω 5% RC11 0805	
3965 4822 051 20331 330Ω 5% RC11 0805	
3967 4822 051 20473 47KΩ 5% RC11 0805	
3968 4822 051 20473 47KΩ 5% RC11 0805	
3971 4822 051 20221 220Ω 5% RC11 0805	
3972 4822 051 20153 15KΩ 5% RC11 0805	
3973 4822 051 20153 15KΩ 5% RC11 0805	
10. 10mm 001 m0100 101mm 0/011011 0000 1	
3975 4822 051 20221 2200 5% RC11 0805	
3975 4822 051 20221 220Ω 5% RC11 0805 3977 4822 051 20221 220Ω 5% RC11 0805	

PCS 87 792

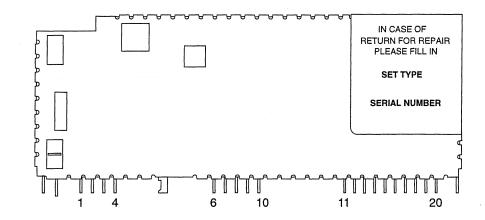
8a



IC91 MODULE

Do not open nor try to repair yourself!

This module is a Service Part as a complete sub-assembly and must be ordered with the normal procedure.



13 I²C SDA

14 I²C SCL

15 Not used 16 Output Left

18 Ground

19 Not used

20 Not used

17 Output Right

Connections

- AM/FM Aerial input
- 2 Ground
- Not used 3
- Not used
- Output lock detector
- Vcc 8.5V
- 8 Ground
- Vcc 5.0V
- 10 V reference

Quick reference data:

-) AM part
- -Longwave/Mediumwave 144-1710 KHz
- -Shortwave 5900-6250 KHz
- -AM double super concept
- -AM IF1 10.7MHz
- -AM IF2 450KHz
- -First VCO frequency above input signal frequency
- -Second X-tal oscillator frenquency below IF1
- -Usable sensivity α 26dB MW = 14 μ V typ.

1) FM part

- -FM 87.5 108MHz
- -FM double super concept
- -FM IF1 72.2MHz

11 Multiplex / RDS output signal

12 Unweighted level output

- -FM IF2 10.7MHz
- -First VCO frequency above input signal frequency
- -Second X-tal oscillator frenquency below IF1
- -Usable sensivity $\alpha 26dB = 2.5 \mu V$ typ.
- -THD 1mV $\delta f=75$ KHz = 0.4% typ
- -Signal to noise ratio = 65dB typ
- -Locktime synthetizer <2mSec



WARNING

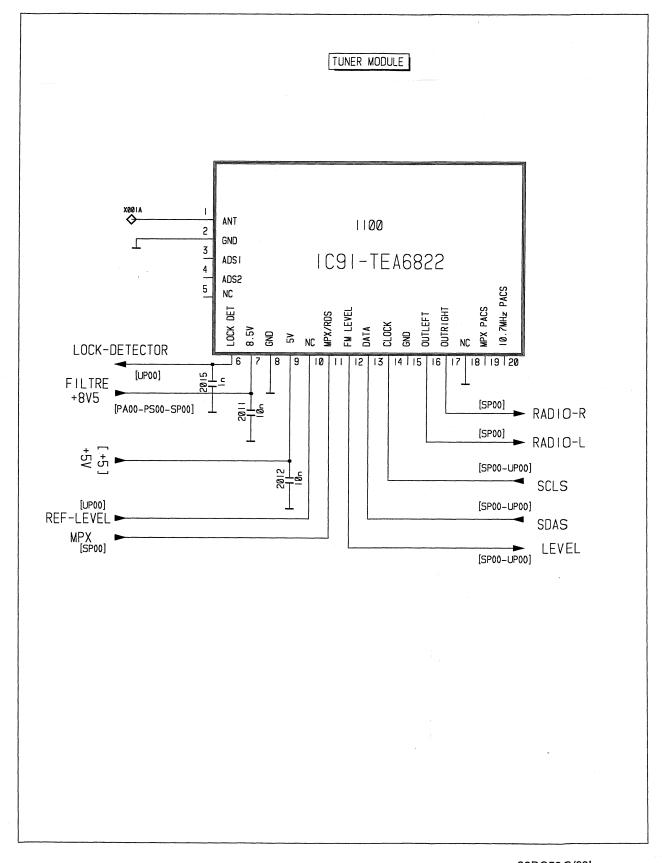
All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life

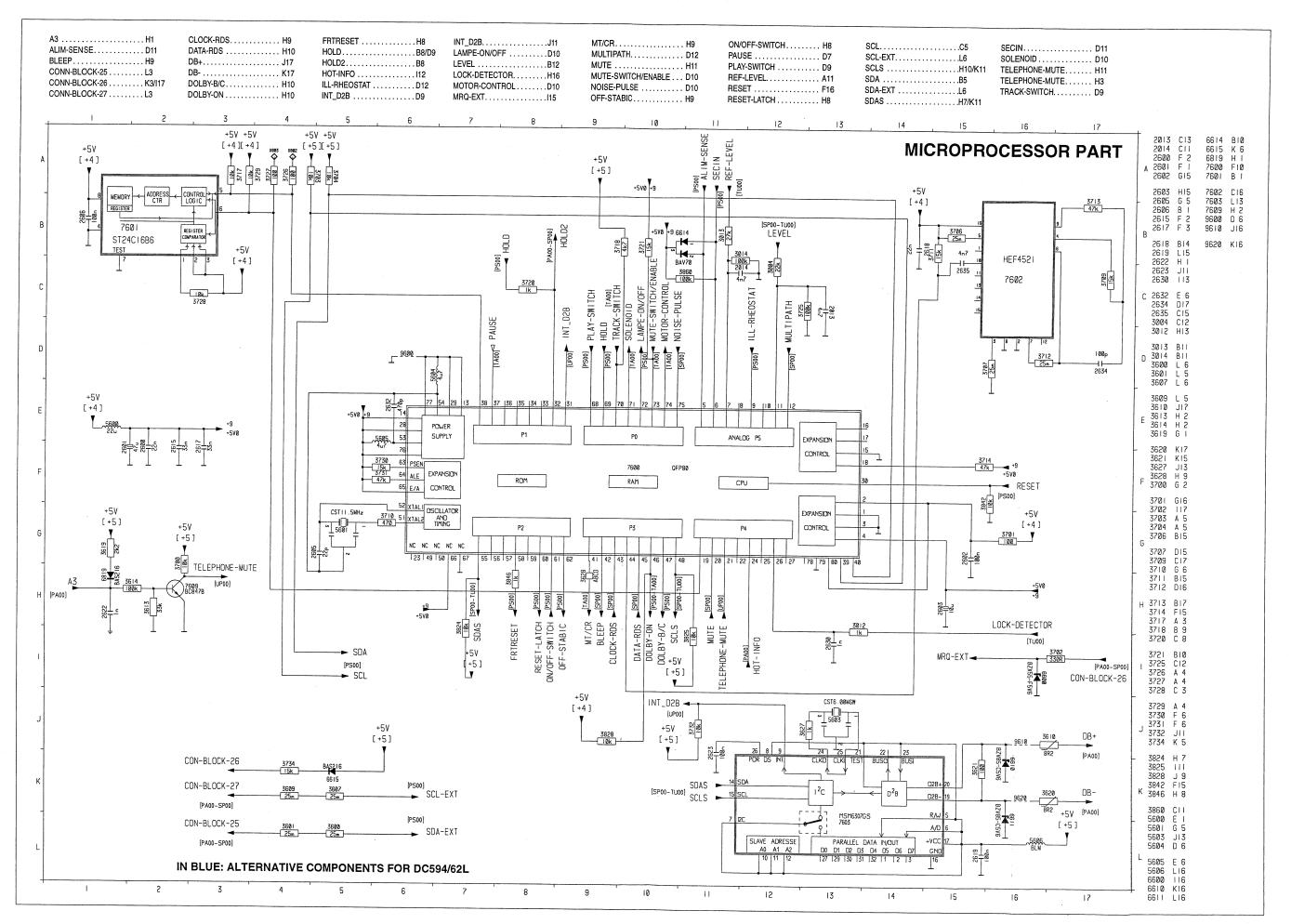
drastically.

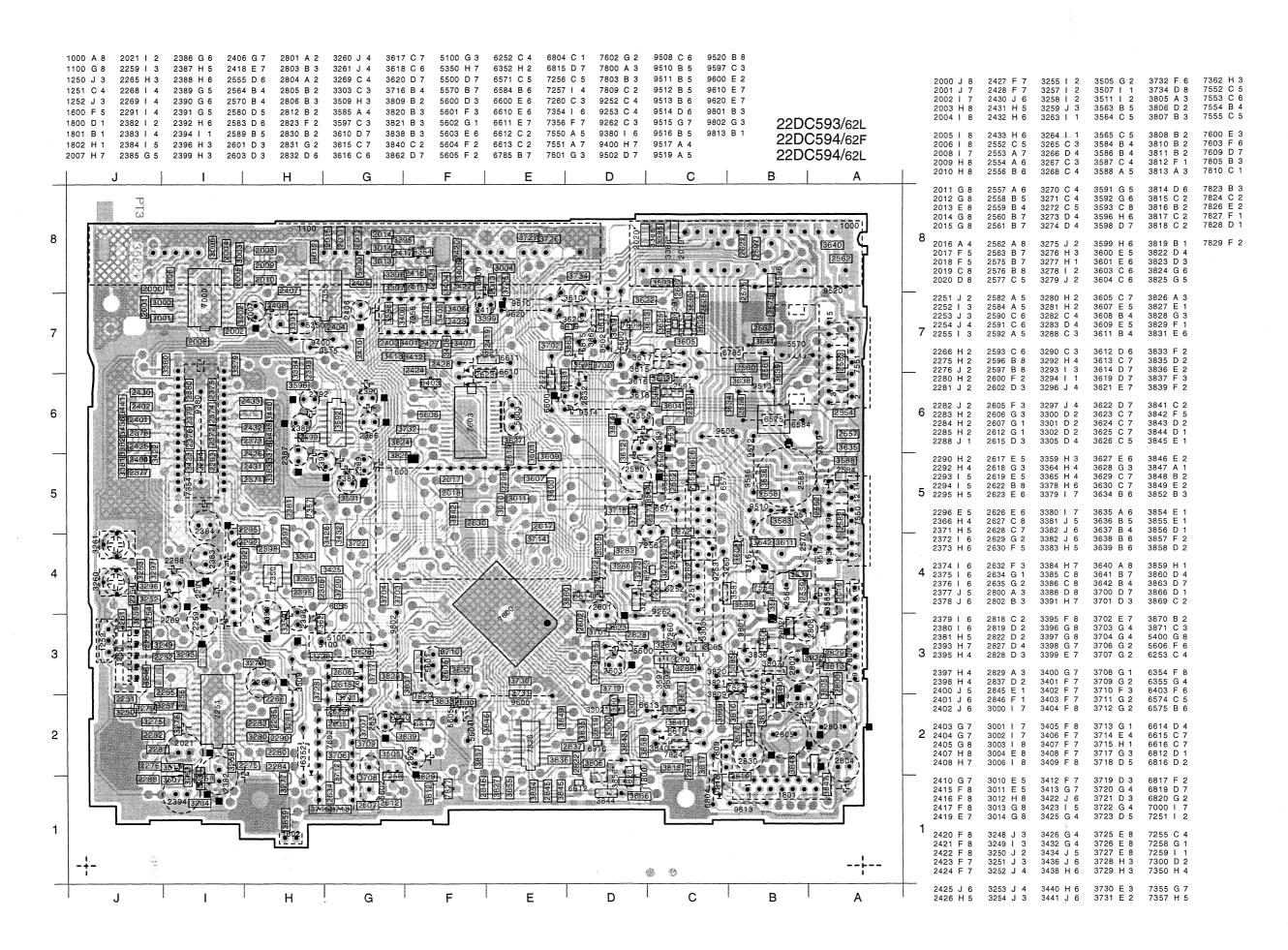
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

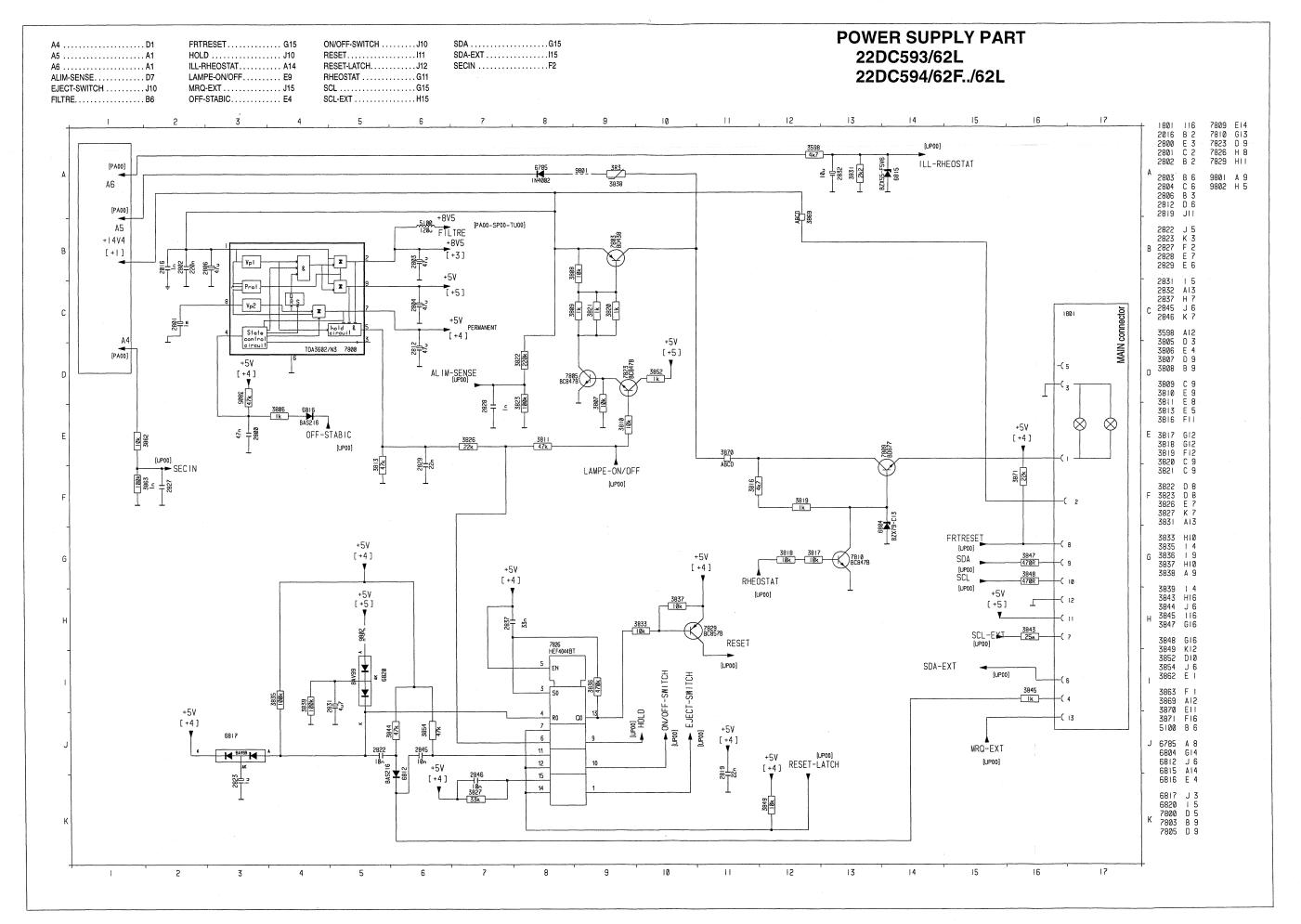
ESD equipment available:

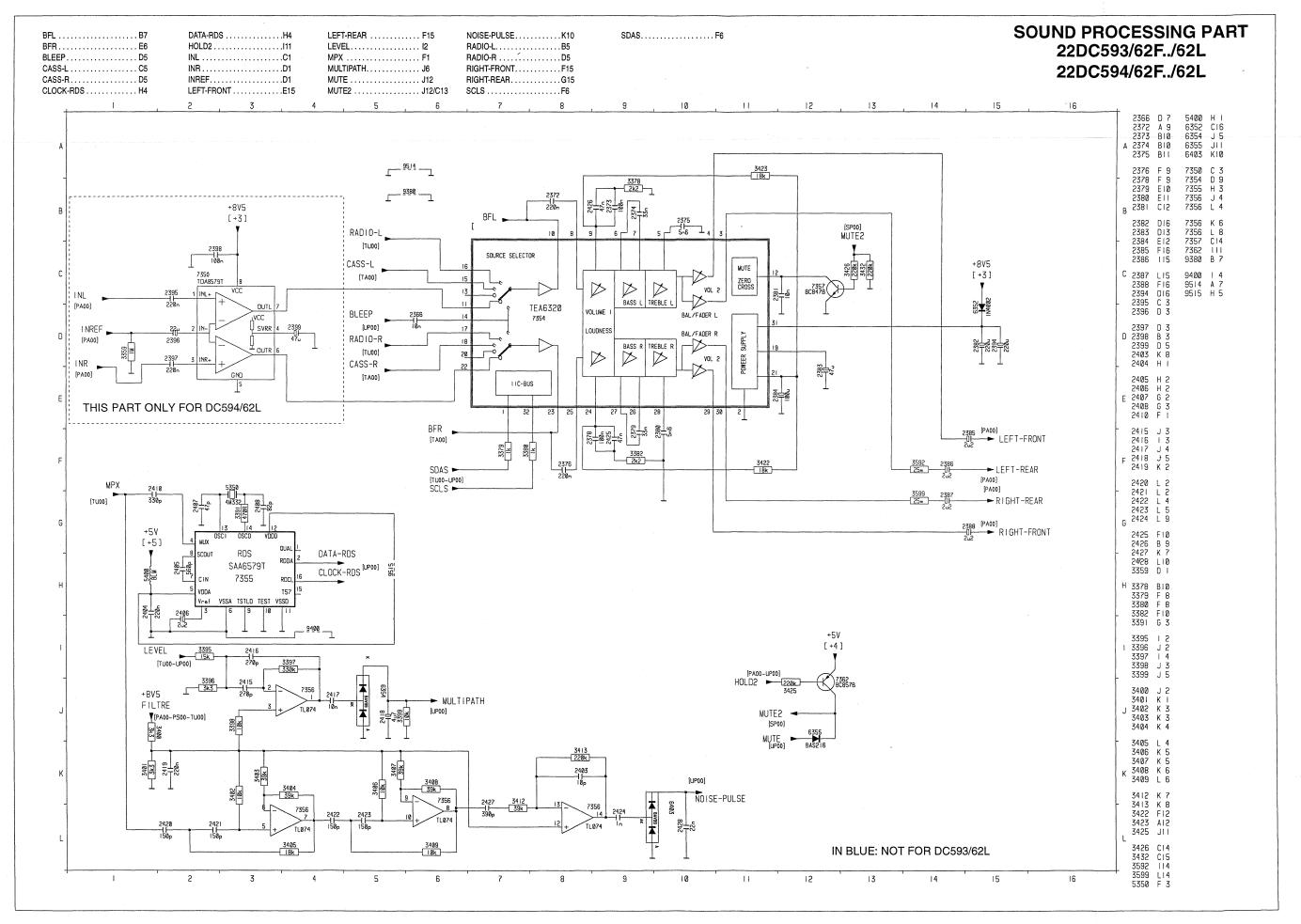
Anti-static table mat large 100X650X1.25mm	4822 466 10953
small 600X650X1.25mm	4822 466 10958
Connection box (1Mohm)	4822 395 10223
Extendible cable (to connect wrist band	4822 320 11307
to connection box)	
Connecting cable (to connect table mat	4822 320 11305
to connection box)	
Earth cable (to connect any product to	4822 320 11308
mat or box)	
Complete kit ESD3 (combining all above	4822 310 10671
products)	
wristband tester	4822 344 13999

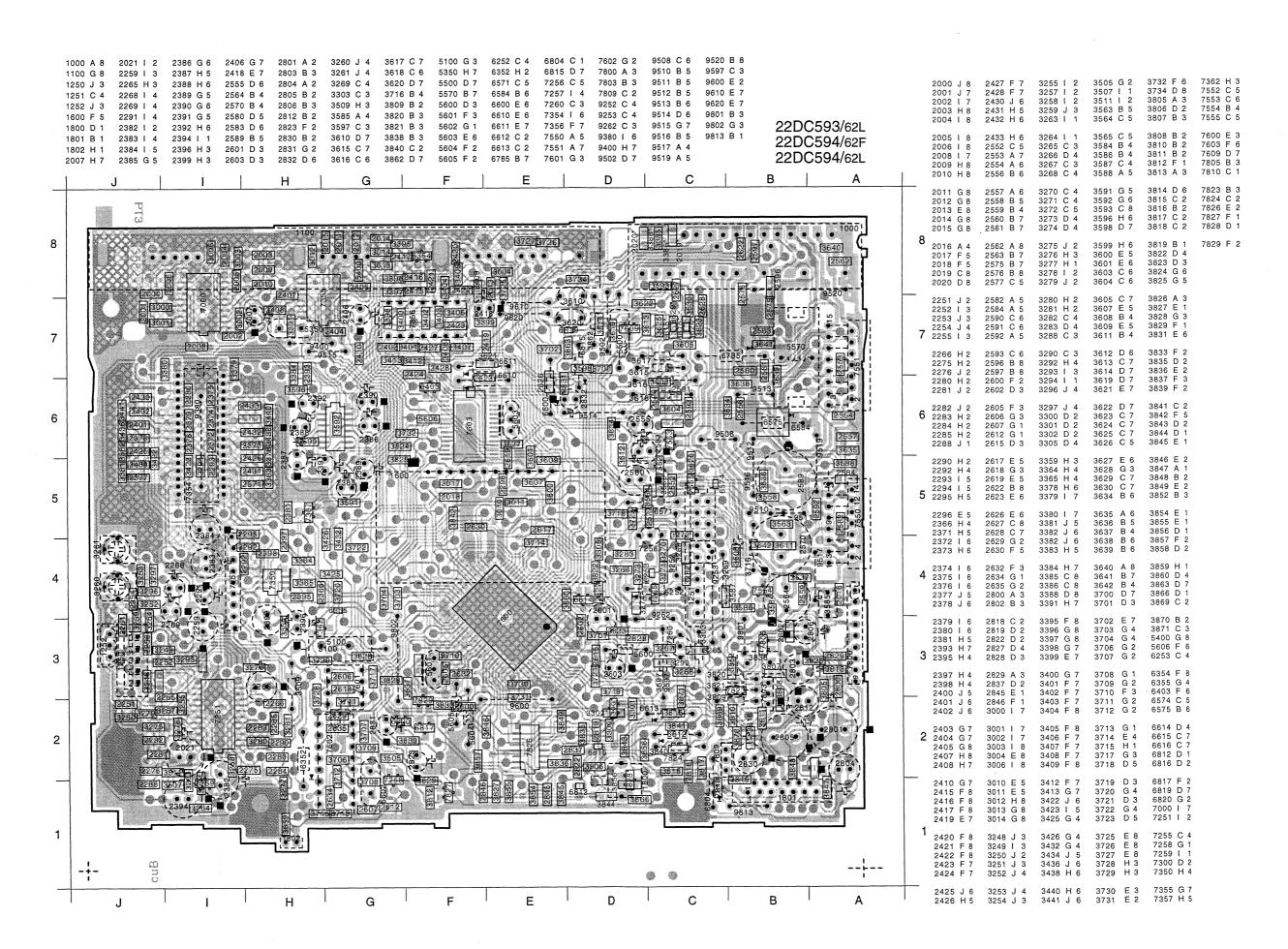




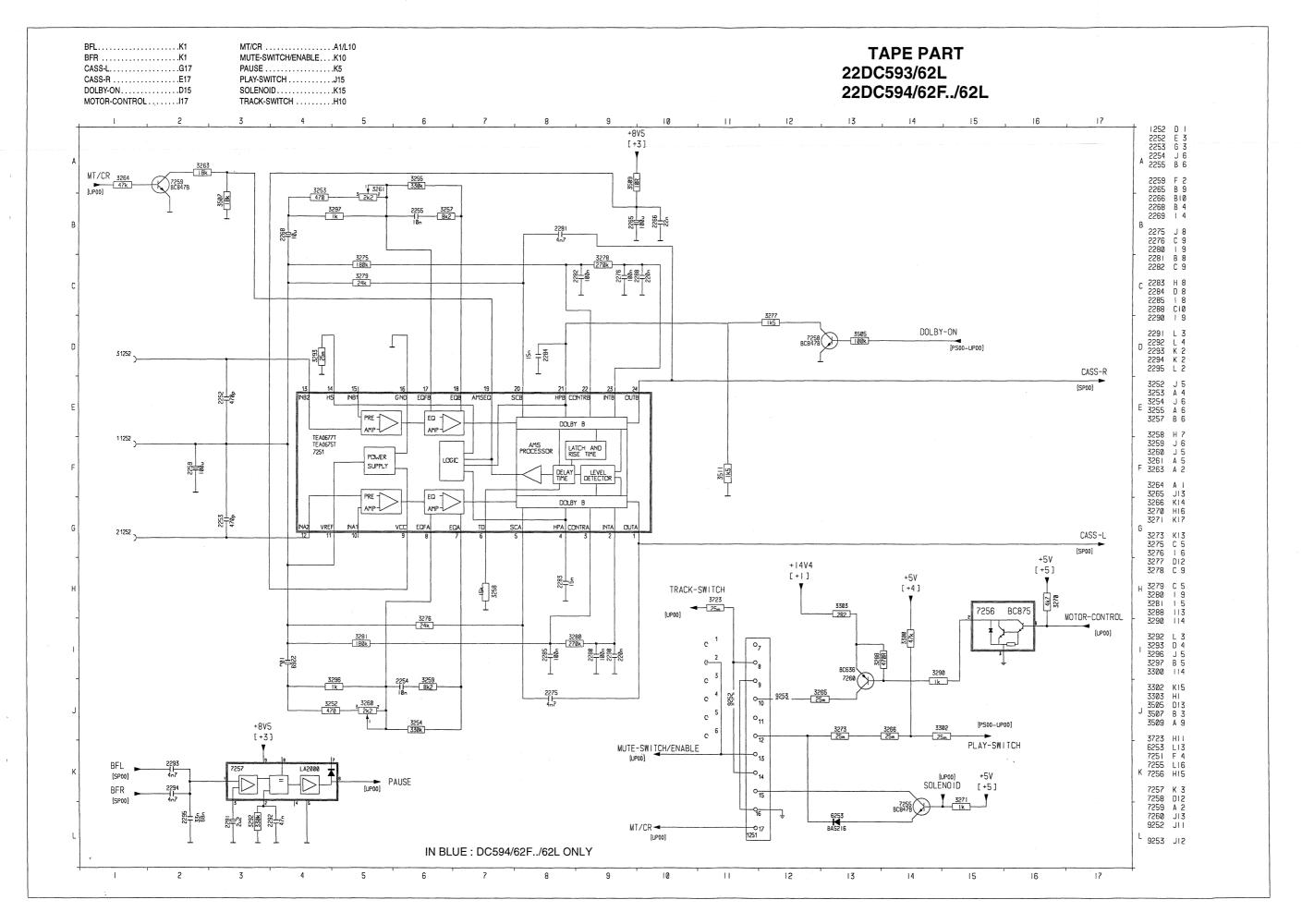


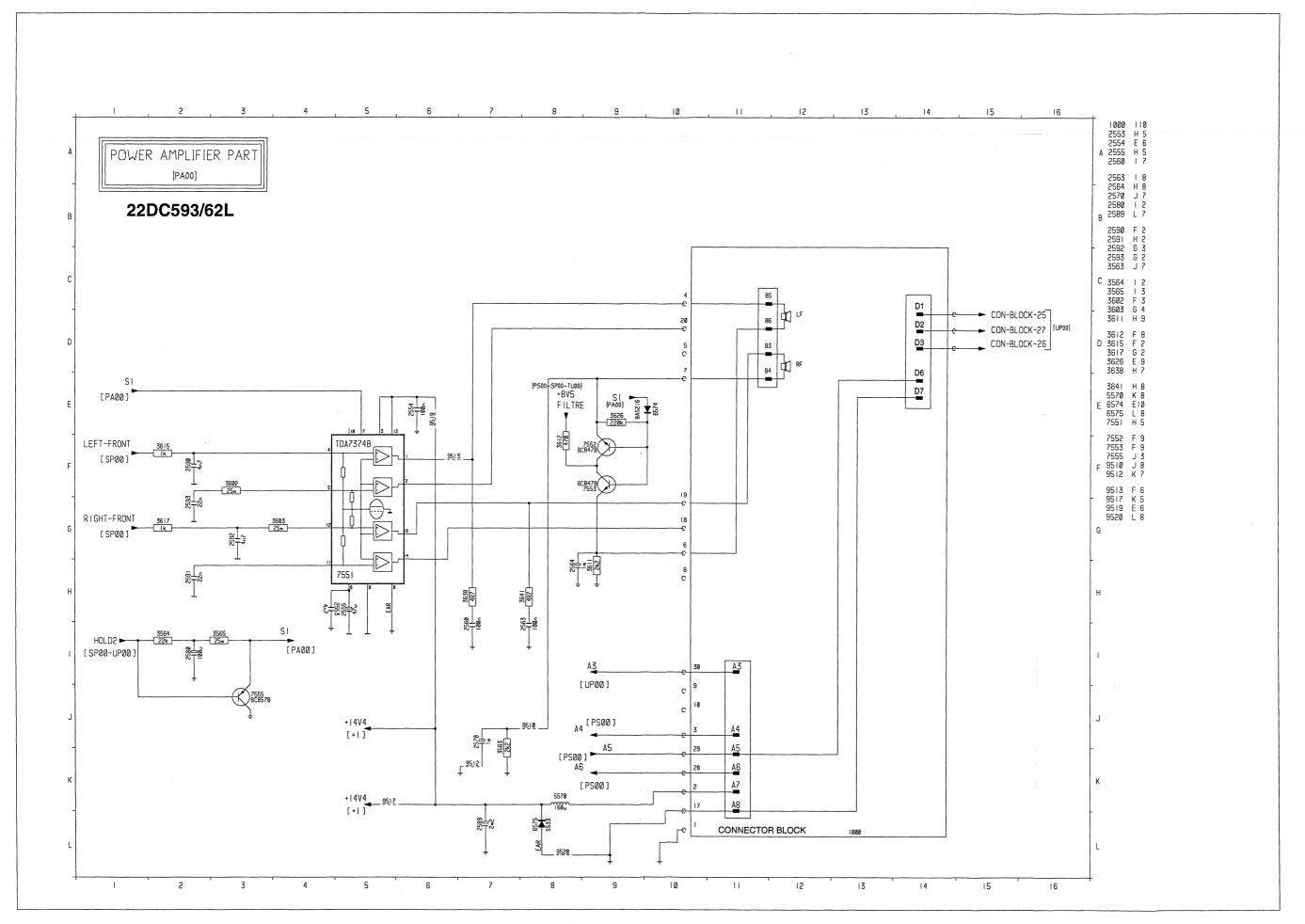


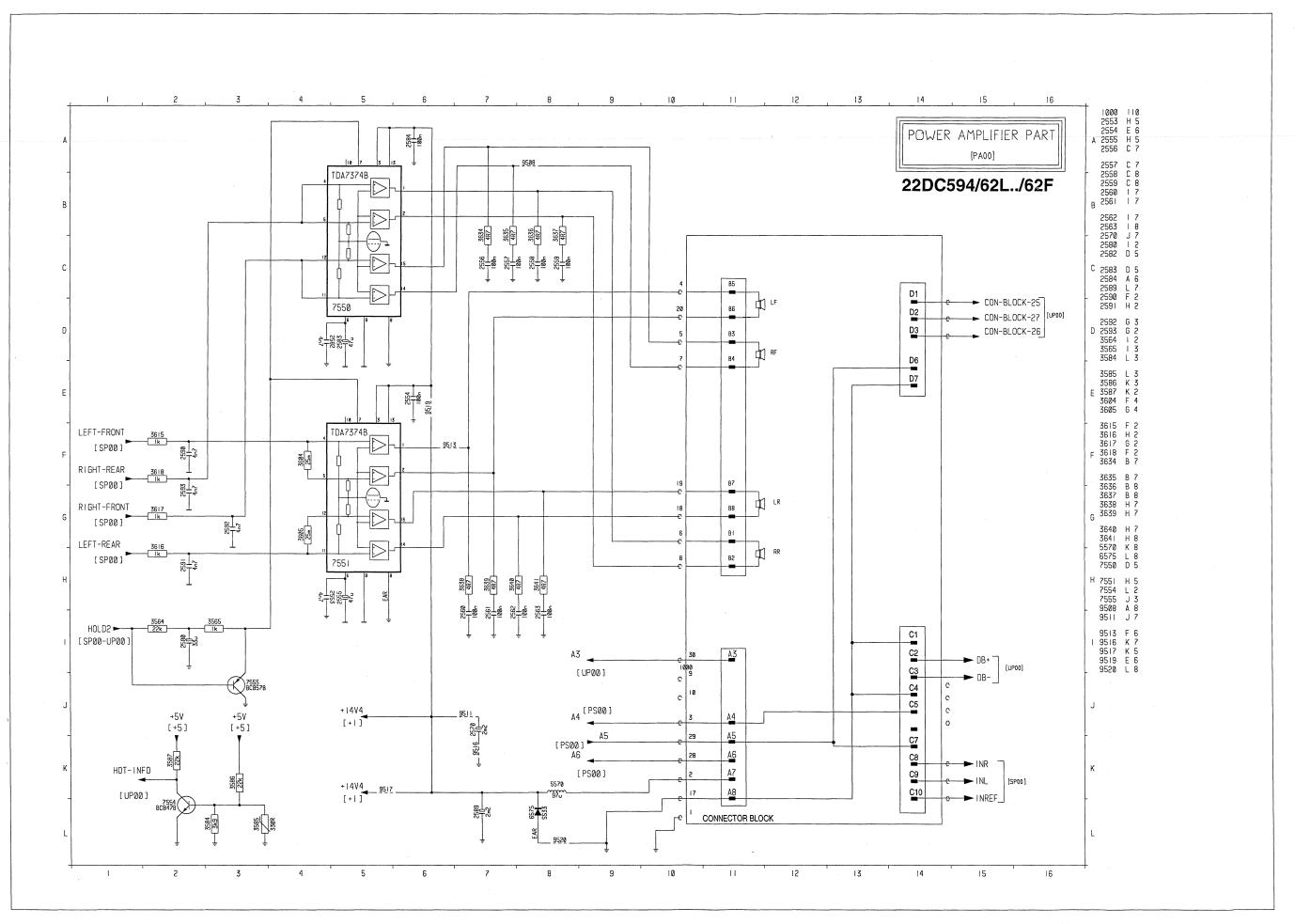




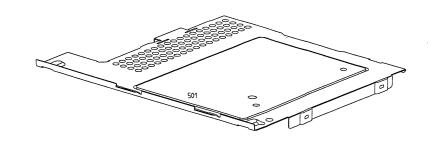
15a PCS 87 799

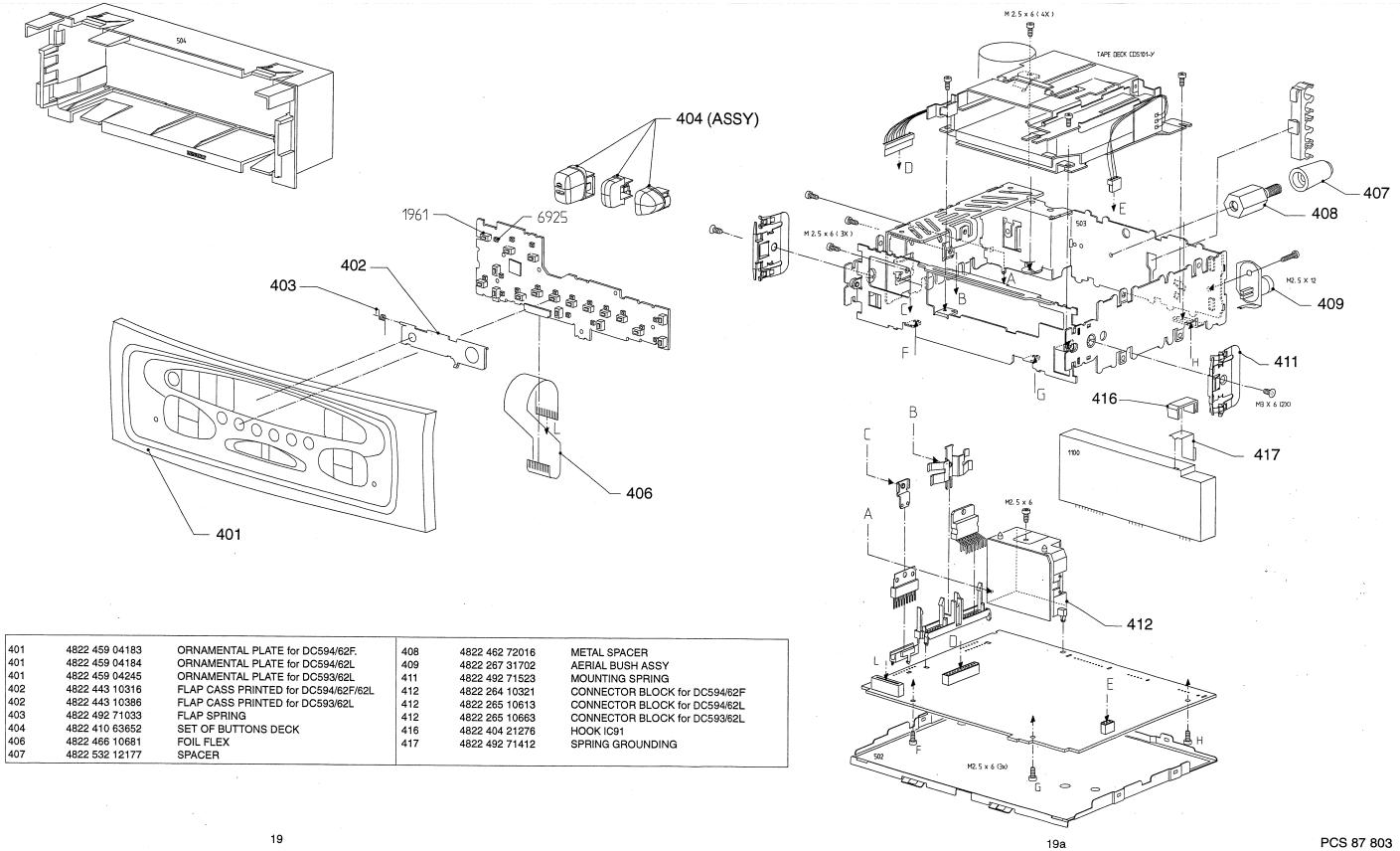






22DC594/62L../62F 22DC593/62L





Miscellaneous			11-		
1100	4822 210 10705	MODULE TUNER IC91	2415	4822 122 33216	270P 50V NP0 0805
			2416	4822 122 33216	270P 50V NP0 0805
41-		•	2417	5322 122 34098	10nF 10% X7R 63V
			2418	4822 124 80765	4.7μF 20% 35V
2011	5322 122 34098	10nF 10% X7R 63V	2419	4822 126 13849	220nF 10% 16V X7R 0805
2012	5322 122 34098	10nF 10% X7R 63V	2413	4022 120 13049	22011F 10% 16V X/R 0805
2013	5322 126 10223	4,7nF 10% X7R 63V	2420	5322 122 33538	150pE 09/ ND0 60V
2014	5322 126 10223	4,7nF 10% X7R 63V	2421		150pF 2% NP0 63V
2015	5322 122 34123	1nF 10% X7R 50V	1	5322 122 33538	150pF 2% NP0 63V
			2422	5322 122 33538	150pF 2% NP0 63V
2016	5322 122 34123	1nF 10% X7R 50V	2423	5322 122 33538	150pF 2% NP0 63V
2252	5322 126 10184	820pF 50V 5% CER1 0805	2424	5322 122 34123	1nF 10% X7R 50V
·2253	5322 126 10184	820pF 50V 5% CER1 0805			
2254	5322 122 34098	10nF 10% X7R 63V	2425	4822 126 13343	47nF 10% X7R 25V
2255	5322 122 34098	10nF 10% X7R 63V	2426	4822 126 13343	47nF 10% X7R 25V
		10111 1070707111001	2427	4822 122 32636	390pF 5% SL 50V
2259	4822 124 80453	100μF 20% 10V	2428	5322 122 32654	22nF 10% X7R 63V
2265	4822 124 80453		2553	5322 126 10223	4,7nF 10% X7R 63V
		100μF 20% 10V			,
2266	5322 122 32654	22nF 10% X7R 63V	2554	4822 122 33496	100nF 10% X7R 63V
2268	4822 124 41017	10μF 16V	2555	5322 124 41938	47µF 6V3
2269	4822 124 41017	10μF 16V	2556	4822 126 13196	100nF 25V 10% X7R 0805
			2557		100nF 25V 10% X7R 0805
2275	5322 126 10223	4,7nF 10% X7R 63V	2558	4822 126 13196	
2276	4822 126 13196	100nF 10% X7R 25V	2006	4822 126 13196	100nF 25V 10% X7R 0805
2280	4822 126 13196	100nF 10% X7R 25V	0556	1000 100 1515	400 = 0=11
2281	5322 126 10223	4,7nF 10% X7R 63V	2559	4822 126 13196	100nF 25V 10% X7R 0805
2282	4822 126 13196	100nF 10% X7R 25V	2560	4822 126 13196	100nF 10% X7R 25V
			2561	4822 126 13196	100nF 10% X7R 25V
2283	4822 126 13188	15nF 5% X7R 63V	2562	4822 126 13196	100nF 10% X7R 25V
2284	4822 126 13188	15nF 5% X7R 63V	2563	4822 126 13196	100nF 10% X7R 25V
2285	4822 126 13196	100nF 10% X7R 25V	1		
2288			2570	4822 124 80769	2200μF 20% 16V
2290	4822 126 13849	220nF 10% 16V X7R 0805	2580	4822 124 23281	33μF 20% 16V
2290	4822 126 13849	220nF 10% 16V X7R 0805	2582	5322 126 10223	4,7nF 10% 50V X7R
			2583	5322 124 41938	47μF 20% 6V3
0004	1000 101 00001	0.0 = 0.00	2584	4822 122 33496	100nF 10% 50V X7R 1206
2291	4822 124 23504	2.2μF 20% 50V		1011 111 00 100	100111 1070 004 7771 1200
2292	4822 126 13343	47nF 10% X7R 25V	2589	4822 124 80769	2200U 20% 16V
2293	5322 126 10223	4,7nF 10% X7R 63V	2590	5322 126 10223	4.7nF 10% X7R 63V
2294	5322 126 10223	4,7nF 10% X7R 63V	2591		,
2295	4822 126 13392	68nF 10% X7R 0805	2592	5322 126 10223	4,7nF 10% X7R 63V
			1	5322 126 10223	4,7nF 10% X7R 63V
2366	5322 122 34098	10nF 10% X7R 63V	2593	5322 126 10223	4,7nF 10% X7R 63V
2372	4822 126 13849	220nF 10% 16V X7R 0805	0000	5000 400 00054	00 5 400/ 1/55 001/
2373	4822 126 13196	100nF 10% X7R 25V	2600	5322 122 32654	22nF 10% X7R 63V
2374	4822 122 33342	33nF 0% X7R 63V	2601	4822 124 22646	47μF 20% 16V
2375	4822 122 32646	5,6nF 10% X7R 50V	2602	4822 126 13196	100nF 10% X7R 25V
			2603	4822 124 41017	10μF 16V
2376	4822 126 13849	220nF 10% 16V X7R 0805	2605	5322 122 32658	22pF 5% 50V
2378	4822 126 13196	100nF 10% X7R 25V			
2379	4822 122 33342	33nF 10% X7R 63V	2606	4822 126 13196	100nF 10% X7R 25V
2380	4822 122 32646	5,6nF 10% X7R 50V	2615	4822 122 33342	33nF 10% X7R 63V
2381	5322 122 34098	10nF 10% X7R 63V	2617	4822 122 33342	33nF 10% X7R 63V
2001	3322 122 34090	10111 10 % X/H 63V	2618	5322 122 32654	22nF 10% X7R 63V
2200	4000 104 00500	000 5 401/	2622	5322 122 34123	1nF 10% X7R 50V
2382	4822 124 23582	220μF 10V			
2383	4822 124 22646	47μF 20% 16V	2630	5322 122 34123	1nF 10% X7R 50V
2384	4822 124 80453	100μF 20% 10V	2632	5322 122 32268	
2385	4822 124 23504	2,2μF 20% 50V	2634		470pF 10% 50V
2386	4822 124 23504	2,2μF 20% 50V	1	5322 122 32531	100pF 5% NP0 50V
			2635	5322 126 10223	4,7nF 10% X7R 63V
2387	4822 124 23504	2,2μF 20% 50V	2800	4822 126 13343	47nF 10% X7R 25V
2388	4822 124 23504	2,2μF 20% 50V			
2394	4822 124 23582	220μF 10V	2801	4822 124 80766	1000μF 20% 25V
2403	5322 122 32448	10pF 5% 50V	2802	4822 126 13849	220nF 10% 16V X7R 0805
2404	4822 126 13849	220nF 10% 16V X7R 0805	2803	4822 124 22646	47μF 20% 16V
-10-7	TOEE 120 10040	22011 10/6 10V A/N 0605	2804	4822 124 22646	47μF 20% 16V
2405	E000 110 000F0	ECONE EN NEO CON	2806	4822 124 11562	47μF 20% 35V
2405	5322 116 80853	560pF 5% NP0 63V			
2406	4822 124 23504	2.2μF 20% 50V	2812	4822 124 22646	47μF 20% 16V
2407	5322 122 32452	47pF 5% NP0 63V	2819	5322 122 32654	•
2408	4822 122 33515	82pF 5% NP0 63V	1		22nF 10% X7R 63V
2410	5322 122 31863	330pF 5% NP0 50V	2822	5322 122 34098	10nF 10% X7R 63V
			2823	4822 124 23282	1μF 20% 50V
			2827	5322 122 34123	1nF 10% X7R 50V

11-					
2828	5322 122 34123	1nF 10% X7R 50V	3406	4822 117 10833	10KΩ 1% 0,1W
2829	5322 122 32654	22nF 10% X7R 63V	3407	4822 051 20393	39KΩ 5% 0,1W
2831	4822 124 80765	4.7μF 20% 35V	3408	4822 051 20393	39KΩ 5% 0,1W
2832	4822 124 41017	10μF 16V	3409	4822 117 10833	10KΩ 1% 0,1W
2837	4822 122 33342	33nF 10% X7R 63V	3412	4822 051 20393	39KΩ 5% 0,1W
					00.1220700,111
2845 2846	5322 122 34098	10nF 10% X7R 63V	3413	4822 051 20224	220KΩ 5% 0,1W
2840	5322 122 34098	10nF 10% X7R 63V	3422	4822 051 20183	18KΩ 5% RC11 0805
			3423	4822 051 20183	18KΩ 5% RC11 0805
			3425	4822 051 20224	220KΩ 5% 0,1W
3004	4822 051 20223	22KΩ 5% RC11 0805	3426	4822 051 20224	220KΩ 5% 0,1W
3012	4822 051 20102	1KΩ 5% 0,1W			
3013	4822 051 20273	27KΩ5% RC11 0805	3432	4822 051 20224	220KΩ 5% 0,1W
3014	4822 051 20104	100KΩ 5% 0,1W	3505	4822 051 20104	100KΩ 5% 0,1W
3252	4822 051 20471	470Ω 5% 0,1W	3509	4822 116 52176	10Ω 5% 0,5W
0202	4022 031 2047 1	470225760,100	3564	4822 051 20223	22KΩ 5% 0,1W
3253	4822 051 20471	470Ω 5% 0,1W	3565	4822 051 20102	1KΩ 5% RC11 0805
3254	4822 051 20334	330KΩ 5% 0.1W			
3255	4822 051 20334	330KΩ 5% 0,1W	3584	4822 051 20392	3K9 5% 0,1W
3257	4822 051 20822	,	3585	4822 116 40254	330Ω
		8K20 5% 0,1W	3586	4822 051 20223	22KΩ 5% 0,1W
3258	4822 051 20153	15KΩ 5% 0,1W	3587	4822 051 20223	22KΩ 5% 0,1W
0050	1000 051 0000	01400 #64 5 ****	3592	4822 051 20008	0Ω JUMP. (0805)
3259	4822 051 20822	8K20 5% 0,1W		55. 20000	
3260	4822 100 11681	CAR LIN 1KΩ	3598	4822 051 20472	4K70 5% 0,1W
3261	4822 100 11681	CAR LIN 1KΩ	3599		•
3263	4822 051 20183	18KΩ 5% 0,1W	1	4822 051 20008	0Ω JUMP. (0805)
3264	4822 051 20473	47KΩ 5% 0,1W	3600	4822 051 20008	0Ω JUMP. (0805)
		•	3601	4822 051 20008	0Ω JUMP. (0805)
3265	4822 051 20008	0Ω JUMP. (0805)	3604	4822 051 20008	0Ω JUMP. (0805)
3266	4822 051 20008	0Ω JUMP. (0805)			
3270	4822 051 20472	4K70 5% 0,1W	3605	4822 051 20008	0Ω JUMP. (0805)
3271	4822 051 20102	1KΩ 5% 0,1W	3607	4822 051 20008	0Ω JUMP. (0805)
3273	4822 051 20008	0Ω JUMP. (0805)	3609	4822 051 20008	0Ω JUMP. (0805)
U_ 1 U	TULE UU 1 ZUUU0	022 00 WIF. (0005)	3613	4822 051 20333	33KΩ 5% 0,1W
3275	4000 DE4 00404	19060 50/ 0 414/	3614	4822 051 20104	100KΩ 5% 0,1W
	4822 051 20184	180KΩ 5% 0,1W			
3276	4822 117 10507	24KΩ 1% 0.1W	3615	4822 116 83863	1KΩ 5% 0,5W
3277	4822 117 11139	1K5 1% 0,1W	3616	4822 116 83863	1KΩ 5% 0,5W
3278	4822 051 20274	270KΩ 5% 0,1W	3617		
3279	4822 117 10507	24KΩ 1% 0.1W		4822 116 83863	1KΩ 5% 0,5W
			3618	4822 116 83863	1KΩ 5% 0,5W
3280	4822 051 20274	270KΩ 5% 0,1W	3619	4822 117 11449	2K2 1% 0,1W
3281	4822 051 20184	180KΩ 5% 0,1W			
3288	4822 051 20471	470Ω 5% 0,1W	3628	4822 051 20008	0Ω JUMP. (0805)
3290	4822 051 20102	1KΩ 5% 0,1W	3634	4822 051 20478	4Ω7 5% RC11 0805
3292	4822 051 20102	330KΩ 5% 0,1W	3635	4822 051 20478	4Ω7 5% RC11 0805
JE JE	TULE UU 1 EUUU4	3301/22 3% U, I VV	3636	4822 051 20478	4Ω7 5% RC11 0805
3293	4822 051 20008	OO HIMP (000E)	3637	4822 051 20478	4Ω7 5% RC11 0805
3293 3300		0Ω JUMP. (0805)			
	4822 051 20473	47KΩ 5% 0,1W	3638	4822 051 20478	4R7 5% RC11 0805
3302	4822 051 20008	0Ω JUMP. (0805)	3639	4822 051 20478	4R7 5% RC11 0805
3303	4822 117 10179	2Ω2 5% 0,5W	3640	4822 051 20478	4R7 5% RC11 0805
3378	4822 117 11449	2K2 1% 0,1W	3641	4822 051 20478	4R7 5% RC11 0805
			3700	4822 117 10833	10KΩ 1% 0,1W
3379	4822 051 20102	1KΩ 5% 0,1W	3,00	TUES 117 10000	10132 1/0 0,144
3380	4822 051 20102	1KΩ 5% 0,1W	3701	4822 DE1 20101	1000 59/ 0 134/
3382	4822 117 11449	2K2 1% 0,1W	3701	4822 051 20101	100Ω 5% 0,1W
3391	4822 051 20471	470Ω 5% 0,1W	3702	4822 051 20331	330R 5% RC11 0805
3395	4822 051 20153	15KΩ5% RC11 0805	3703	4822 117 10833	10ΚΩ 1% 0,1W
			3704	4822 117 10833	10ΚΩ 1% 0,1W
3396	4822 051 20332	3K3 5% RC11 0805	3706	4822 051 20008	0Ω JUMP. (0805)
3397	4822 051 20334	330KΩ5% RC11 0805		1000	
3398	4822 117 10833	10ΚΩ 1% 0,1W	3707	4822 051 20008	0Ω JUMP. (0805)
3399	4822 117 10833	10KΩ 1% 0,1W	3709	4822 051 20153	15KΩ 5% 0,1W
3400	4822 051 20332	3K3 5% 0,1W	3710	4822 051 20471	470Ω 5% 0,1W
- TOO	TULE VUI EUUUE	UNU U /0 U, I VV	3711	4822 051 20153	15KΩ 5% 0,1W
2404	4000 054 00000	01/0 50/ 0 434/	3712	4822 051 20008	0Ω JUMP. (0805)
3401	4822 051 20332	3K3 5% 0,1W			,
3402	4822 117 10833	10KΩ 1% 0,1W	3713	4822 051 20473	47KΩ 5% 0,1W
3403	4822 051 20393	39KΩ 5% 0,1W	3713		· · · · · · · · · · · · · · · · · · ·
3404	4822 051 20393	39KΩ 5% 0,1W	1	4822 051 20473	47KΩ 5% 0,1W
3405	4822 051 20183	18KΩ 5% 0,1W	3717	4822 117 10833	10KΩ 1% 0,1W
		,	3718	4822 051 20472	4K70 5% 0,1W
			3720	4822 051 20102	1KΩ 5% 0,1W

22DC593/62L 22DC594/62F../62L

					
				<u> </u>	
3721	4822 051 20153	15KΩ 5% 0,1W	5600	4822 157 52983	22UH 10%
3723	4822 051 20008	0R05 JUMPER 0805	5601	4822 242 81959	CST11.5MTW
3725	4822 051 20104	100KΩ 5% 0,1W	5603	4822 242 81002	CST6,00MGW-TF01
3726	4822 051 20101	100Ω 5% 0.1W	5604	4822 157 60122	0010,000,000
3727	4822 051 20101	100Ω 5% 0,1W	5605	4822 157 60122	
3727	4022 031 20101	10022 576 0,1 VV	3603		
3728	4822 117 10833	10KΩ 1% 0,1W	→	₩	
3729	4822 117 10833	10KΩ 1% 0,1W	0050	1000 100 00===	21022224014
3730	4822 051 20153	15KΩ 5% 0,1W	6253	4822 130 83757	DIODE BAS16
3731	4822 051 20473	47KΩ 5% 0,1W	6352	5322 130 30684	1N4002GPE
3734	4822 051 20153	15KΩ 5% RC11 0805	6354	5322 130 34337	BAV99
0.0.	1022 001 20100	10144 070 110 11 0000	6355	4822 130 83757	DIODE BAS216
3805	4822 051 20473	47KO E9/ 0 1M	6403	5322 130 34337	BAV99
1 ' '		47KΩ 5% 0,1W	1		
3806	4822 051 20102	1KΩ 5% 0,1W	6575	4822 130 10488	SM DIO S3G
3807	4822 117 10833	10KΩ 1% 0,1W	6600	4822 130 34173	ZENER BZX55-F5V6
3808	4822 117 10833	10KΩ 1% 0,1W			
3809	4822 116 83863	1KΩ 5% 0,5W	6614	5322 130 34331	BAV70
·			6615	4822 130 83757	DIODE BAS216
3810	4822 117 10833	10KΩ 1% 0,1W	6785	5322 130 30684	1N4002GPE
3811	4822 051 20473	47KΩ 5% 0,1W			
3813	4822 051 20473	47KΩ 5% 0,1W	6804	4822 130 34195	BZX79-C13
		·	6812	4822 130 83757	DIODE BAS216
3816	4822 051 20472	4K70 5% 0,1W	6815	4822 130 34173	BZX55-F5V6
3817	4822 117 10833	10KΩ 1% 0,1W	6816	4822 130 83757	DIODE BAS216
I			1		
3818	4822 117 10833	10KΩ 1% 0,1W	6817	5322 130 34337	BAV99
3819	4822 051 20102	1KΩ 5% 0,1W			
3820	4822 116 83863	1KΩ 5% 0,5W	6818	5322 130 34331	BAV70
3821	4822 116 83863	1KΩ 5% 0,5W	6819	4822 130 83757	DIODE BAS216
3822	4822 051 20224	220KΩ 5% 0,1W	6820	5322 130 34337	BAV99
0022	4022 001 20224	220132 3 /6 0, 1 44		000000000	
3823	4822 051 20104	100KΩ 5% 0,1W	Q	000000000	
3824	4822 117 10833	10KΩ 1% 0,1W	7251	4822 209 32744	TEA0675T/V1
3825	4822 117 10833	10KΩ 1% 0,1W	7255		
3826	4822 051 20223	22KΩ 5% 0,1W	1	4822 130 60511	BC847B
		•	7256	5322 130 61677	BC875
3827	4822 051 20333	33KΩ 5% 0,1W	7257	4822 209 83159	LA2000
	4000	12142 121 2 1111	7258	4822 130 60511	BC847B
3828	4822 117 10833	10KΩ 1% 0,1W	1		
3831	4822 117 11449	2K2 1% 0,1W	7259	4822 130 60511	BC847B
3833	4822 117 10833	10KΩ 1% 0,1W	7260	4822 130 44283	BC636
3835	4822 051 20104	100KΩ 5% 0,1W	7354	4822 209 32745	TEA6320/V1
3836	4822 051 20474	470KΩ 5% 0,1W	7355	4822 209 31981	SAA6579T/V1
		• •	7356	4822 209 32742	TL074IN
3837	4822 117 10833	10KΩ 1% 0,1W	. 550	, OLL EQU OE 1 72	. 557-1114
3838	4822 116 40267	3R3 25% 20V	7357	1800 100 60511	DC947D
3839	4822 051 20104	100KΩ 5% 0,1W	1	4822 130 60511	BC847B
3842	4822 117 10833	10KΩ 1% 0,1W	7362	5322 130 60508	BC857B
ľ		•	7550	4822 209 90404	TDA7374B
3843	4822 051 20008	0R05 JUMPER 0805	7551	4822 209 31132	TDA7374V
	1000 5-1		7551	4822 209 90404	TDA7374B
3844	4822 051 20473	47KΩ 5% 0,1W	1		
3845	4822 051 20102	1KΩ 5% 0,1W	7554	4822 130 60511	BC847B
3846	4822 051 20102	1KΩ 5% 0,1W	7555	5322 130 60508	BC857B
3847	4822 051 20471	470Ω 5% 0,1W	7600	4822 209 13609	P83CE558EFB/0
3848	4822 051 20471	470Ω 5% 0,1W	· F		
		045 0 /0 0, 1 44	7601	4822 900 xxxxx	EEPROM SECURITY CODE
3940	1900 117 10000	101/0 19/ 0 114/	7602	5322 209 10468	HEF4521BP
3849	4822 117 10833	10KΩ 1% 0,1W			
3852	4822 051 20102	1KΩ 5% 0,1W	7609	4822 130 60511	BC847B
3854	4822 051 20473	47KΩ 5% 0,1W	7800	4822 209 33029	TDA3602/N3
3860	4822 051 20104	100KΩ 5% 0,1W	7803	4822 130 40995	BD438(141Y)
3862	4822 116 83864	10KΩ 5% CRB R-20	7805	4822 130 60511	BC847B
			7809	4822 130 41484	BD677(142Y)
3863	4822 051 20104	100KΩ 5% 0,1W	1,000	TULE 100 41404	DD0//(1421)
3869	4822 051 20008	0Ω JUMP. (0805)	7040	4000 400 00544	D0047B
3870	4822 051 20008	` ,	7810	4822 130 60511	BC847B
3870	4822 051 20008	0Ω JUMP. (0805)	7823	4822 130 60511	BC847B
30/1	+022 UD 1 2U223	22KΩ 5% RC11 0805	7826	4822 209 12628	HEF4044BT
- ~~-	$-\Box$		7829	5322 130 60508	BC857B
		4001111 404/1 41 4			
5100	4822 157 71433	120UH 10%LAL05TB121K	1		
5350	4822 242 80259	LN-G38-311 (4,332MHZ)	1		
5400	4822 157 71206	BLM21A10PT	1		
5570	4822 157 70935	97UH 10A	1		
			1		
			1		

Car cassette deck CDS-101spf



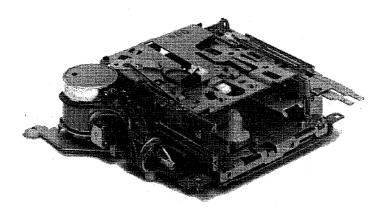
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CDS-101WPF CDS-101XPF CDS-101YPF



PHIL-05033

12 V → ▶



TECHNICAL DATA

Operating voltage

: 10-16V

Tape speed

: 4.76cm/sec ±2%

Wow & flutter

: ≤0.35% RMS (+10 - +45\$C)

Crosstalk (track 2-3)

: <-40dB

Fast wind time

: ≤100secs (C-60)

Number of tracks

: 2x2

Channel separation

(Tracks 1-2/3-4)

: >30dB

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GENERAL

The CDS-101 is supplied in 4 versions: a CDS-101SPF: Standard version.

a. CDS-101SPF: Standard version.b. CDS-101WPF: As CDS-101SPF version, with

Way Off/A M.C. and tone

"Key-Off/A.M.S." and tape

selector included.

c. CDS-101XPF: As CDS-101SPF version, with

"Key-Off/A.M.S." and "Real-Time

FF/REW" included.

As CDS-101SPF version, with

"Key-Off/A.M.S.", "Real-Time FF/REW" and tape selector

included.

(A.M.S. = Automatic Music sensor System)

CONNECTIONS

d. CDS-101YPF:

CDS-101SPF/WPF/YPF

(* WPF/YPF version only; SPF version: N.C.)

Pin no.	Wire colour	Signal
1		
2		
3	Brown	GND
4	Red	+ 14.2 VDC
5	Orange	N.C.
6	Yellow	Play switch
7	Green	Mute switch
8	Blue	Track switch
9	Purple	Solenoid*
10	Grey	N.C.
11	White	Me/Cr sw.*

CDS101-XPF

Pin no.	Wire colour	Signal
1	Brown	GND
2	Red	+ 14.2 VDC
3	Orange	N.C.
4	Yellow	Play switch
5	Green	Mute switch
6	Blue	Track switch
7	Purple	Solenoid
8	Grey	N.C.
9	White	N.C.

HEAD CONNECTIONS

(all versions)

Pin no.	Wire colour	Signal
1	Black	GND
2	White	Left out
3	Pink	Right out

MAINTENANCE

The cassette mechanism requires periodic cleaning.

Cleaning with alcohol or spirit

- Playback head pos.109.
- Capstan & pressure rollers pos.10, 11 and 27.
- Belt (pos.105) & pulley (pos.73).

To clean head, pressure roller and capstan, it is also possible to use drop-in cassette SBC114 (4822 389 20035).

ADJUSTMENTS AND CHECKS

Equipment required:

- Universal test cassette SBC419 (4822 397 30069)
- Universal test cassette SBC420 (4822 397 30071)
- Friction test cassette 811/CTM (4822 395 30054)
- Spring scale 50-500g (4822 395 80028)
- Wow & flutter meter
- AC millivoltmeters

1. Azimuth (Fig. 1 - next page)

Azimuth alignment should be carried out on a complete car radio; proceed as follows:

- Connect the millivoltmeters to the loudspeaker outputs.
- Insert test cassette SBC419 (or SBC420), select NOR (normal play) and play the 10kHz signal.
- Adjust Azimuth screw "FWD DIRECTION" (pos. 137) for equal and maximum output voltage reading for both right and left channel.
- Switch to REV (reverse play) and play the 10kHz signal.
- Repeat the adjustment with screw "REV DIRECTION" (pos.137).

Adjust Azimuth screw "B" (pos.143) for maximum and equal outputs both for NOR and REV play and both for right and left channel. Repeat the procedure, if necessary.

2. Pressure roller pressure

The pressure on the capstan should be 250 - 350 grammes (2.5 - 3.5N).

This pressure is measured as follows (NOR and REV):

- Select Play mode.
- Push the pressure roller back at the shown point by means of the spring scale.
- At the point where pressure roller and capstan just disengage the spring scale should be read.
- If the pressure is incorrect, replace spring 94 (95).

3. Friction clutch (Reel assy) 22

- Insert friction test cassette 811/CTM (NOR and REV).
- Play take-up torque should be 35 75g/cm.
- Fast wind torque should be 40 150g/cm.
- If the torque is not correct, replace reel assy 22.

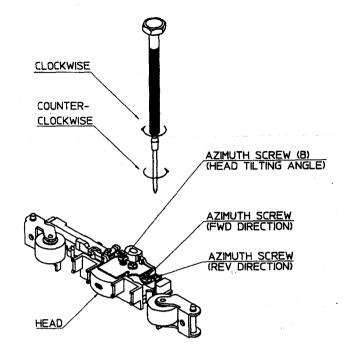
4. Wow & flutter/tape speed (Fig. 2)

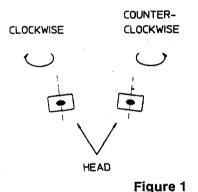
This check is carried out on an complete car radio; proceed as follows:

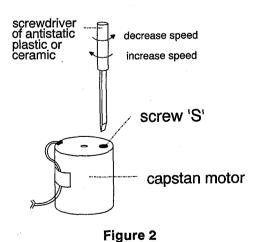
- Connect the wow & flutter meter to the LS outputs.
- Insert test cassette SBC419 (or SBC420) and play the 3150Hz signal.
- The wow & flutter value should be ≤0.35%
- Tape speed should be 4.76cm/sec. ±2%
- The tape speed can be adjusted with screw "S".

In case of an excessive wow & flutter value, check following parts for correct functioning:

- motor 31
- pressure (pinch) rollers 10, 11
- belt 105
- friction clutches (reel assy's) 22
- flywheels 27
- pulley 73







DISASSEMBLY INSTRUCTIONS

Refer to the exploded view to locate all positions.

Cassette Holder assy C

- 1. Bend the back lock of the return link 104 on eject lever 41.
- 2. Remove return link 104.
- 3. Take care that the cassette holder is in UPWARD position!
- 4. Remove screw 142.
- Move the cassette holder assy to the left to unlock it from the pivots of the chassis, and lift the holder upward at the left.
- 6. Take the cassette holder assy out.
- 7. To separate the two parts of the cassette holder assy, lift the rear part up.

Reel base assy D

- 1. Lay the tape deck upside down on a soft surface.
- 2. Remove the four screws 146 which fix the bottom plate 54.
- 3. Remove the two screws 140 and screws 139 which fix the power switch assy A.
- 4. Remove the belt 105.
- 5. Remove the three screws 140 which fix the reel base assv.
- 6. Lift the reel base assy carefully.
- 7. To remove the reel assy 22, put a small screwdriver between the reel base and the reel assy base plate and turn the screwdriver carefully until the reel base gets loose.

Lever unit assy B

- 1. Remove the wire clamp 108.
- 2. Remove the lock arm spring 90.
- 3. Remove the screw 140.
- 4. Lift out the lever unit assy at the front.

Pressure rollers

- First the cassette holder- and lever unit assy's should be removed.
- 2. Lift the pressure roller assy 10/46/47/94 (forward pressure roller) or 11/50/95 (reverse pressure roller).

Head Plate assy F and Head assy

- First the cassette holder- and lever unit assy's should be removed.
- 2. Remove the two screws 136 which fix the tape guide 68.
- 3. Remove the adjuster arm spring 93.
- 4. Remove the head assy 67/93/109.
- 5. Remove the load lever spring 99 (not in -SPF).
- 6. Remove the adjuster link 66.
- 7. Remove the reset arm spring 86.
- 8. Pull the head plate 3 to the right side of the deck and lift it out carefully.

Flywheel 27

- 1. First the cassette holder- and lever unit assy's should be removed.
- 2. Remove the belt 105.
- 3. Remove the E-ring 126 and plate 133.
- 4. Remove the flywheel 27.

Note: Don't forget to re-insert the plate(s) 133 after re-assembling the flywheel(s)!

F/R arm assy G

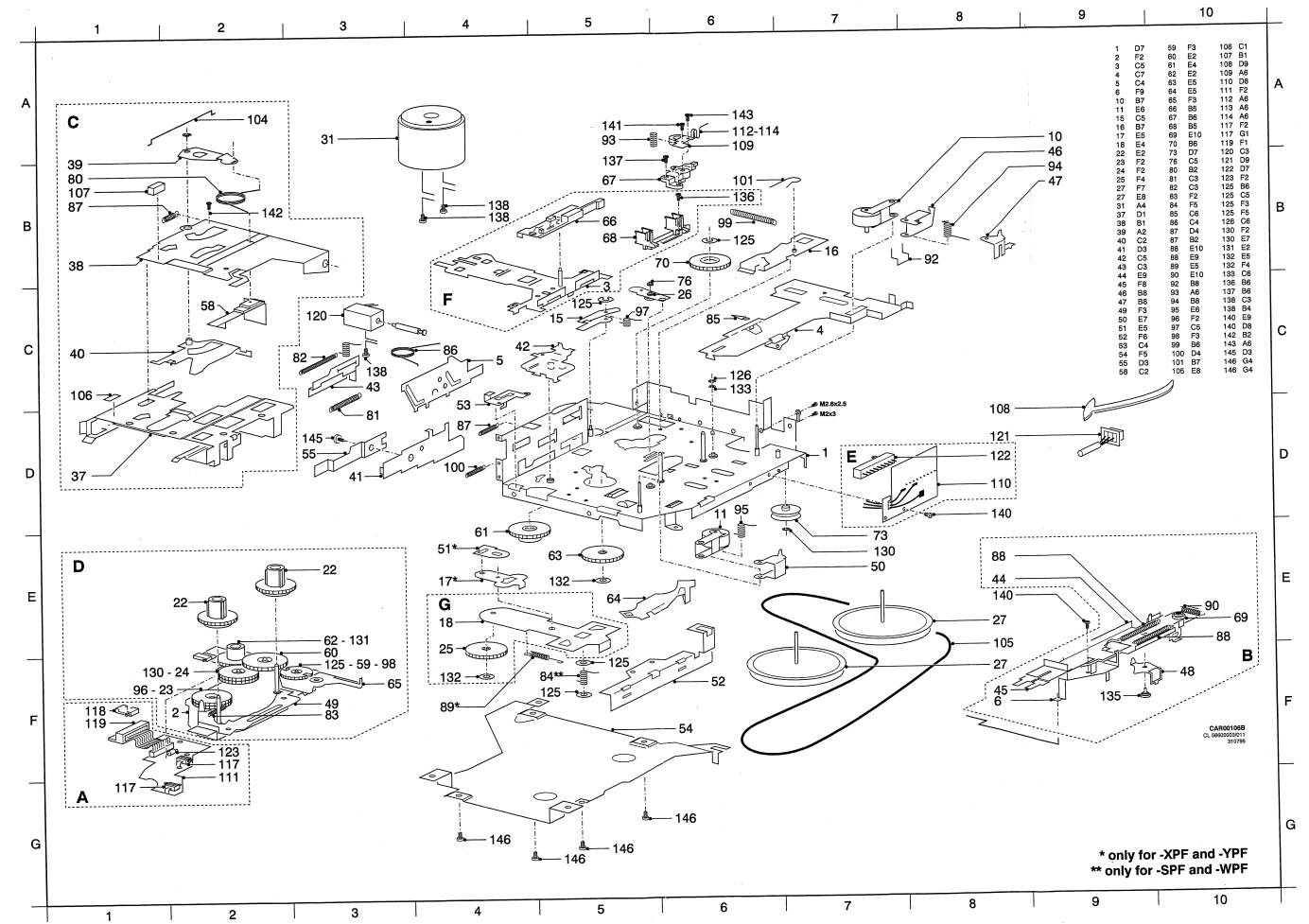
- First the reel base assy and both flywheels should be removed.
- 2. Remove E-ring 125 and the F/R arm spring 84.
- 3. Remove F/R change lever 52.
- 4. Remove the F/R arm assy G.

Motor assy 31

- 1. First the bottom plate 54 should be removed.
- 2. Remove, if present, fixing tapes etc. from the motor.
- 3. Unsolder the two wires from the motor terminals.
- 4. Remove the belt 105 from the motor pulley.
- 5. Remove the two screws 138 which fix the motor and take the motor out.

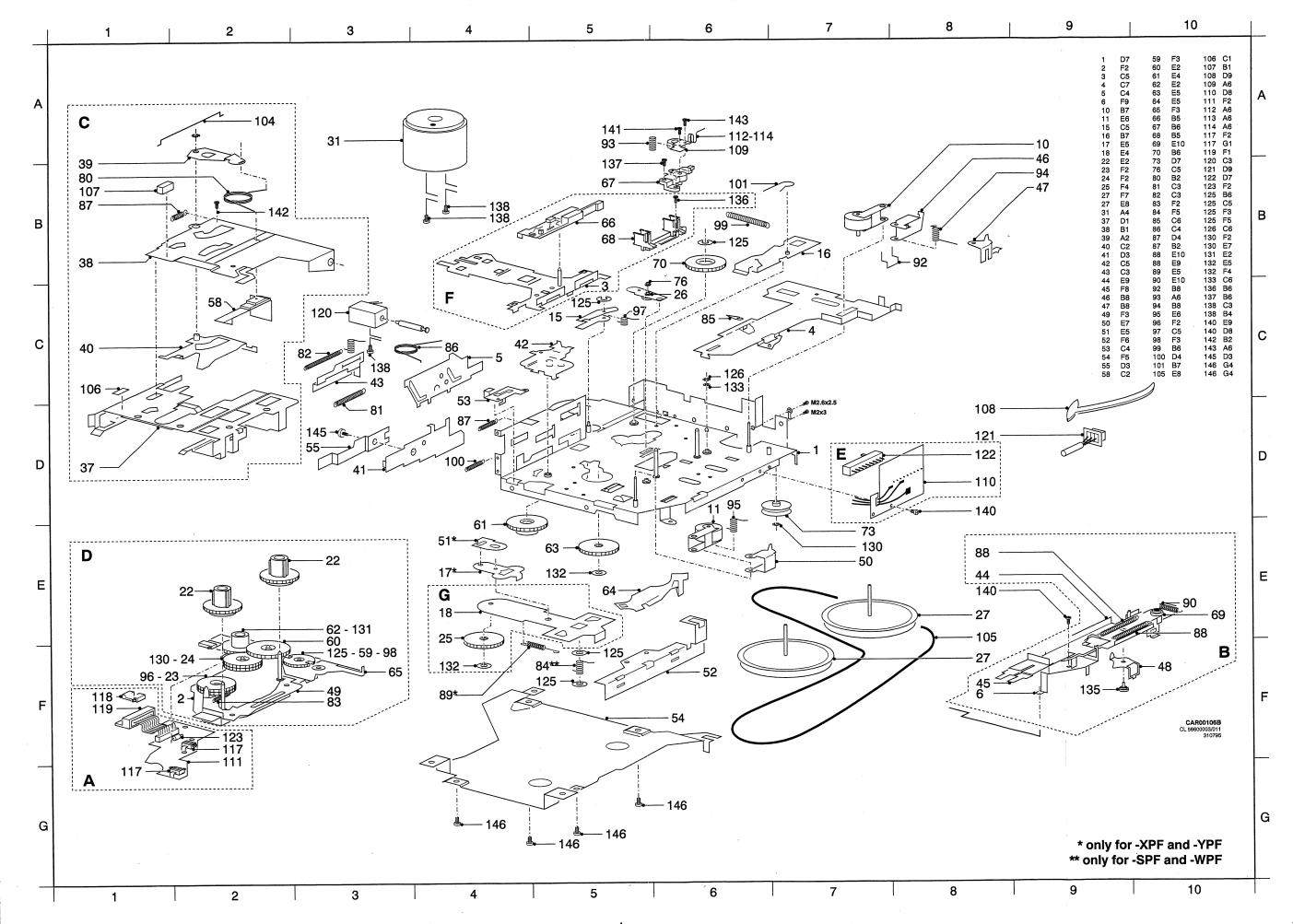
Solenoid 120

- 1. Unsolder the two solenoid wires from the switch pcb 111.
- 2. Remove the screw 138 which fixes the solenoid.



- 3 -

PCS 81 206



PARTSLIST

10 11 22 27 31	4822 528 81548 4822 528 81549 4822 528 10913 4822 528 60429 4822 361 30456	PINCH ROLLER FW PINCH ROLLER REV REEL ASSY FLYWHEEL ASSY MOTOR ASSY	
61 63 70 73 86	4822 522 33539 4822 522 33541 4822 522 33542 4822 528 81551 4822 492 42753	REDUCTION GEAR (A) IDLER GEAR (A) LOAD GEAR IDLER PULLEY (A) RESET ARM SPRING	WPF, XPF, YPF
86 89 93 94 95	4822 492 42756 4822 492 33485 4822 492 33486 4822 492 42754 4822 492 42755	RESET ARM SPRING (K) POS. SETTER SPRING ADJUSTER ARM SPRING PINCH ROLLER SPG FW PINCH ROLLER SPG REW	WPF, XPF, YPF XPF, YPF
101	4822 492 33487 4822 492 33488 4822 492 42757 4822 358 31326 4822 249 30219	LOAD LEVER SPRING ' TAPE SELECTOR SPRING LOAD LEVER SPRING (B) BELT HEAD	WPF, XPF, YPF WPF, YPF WPF, XPF, YPF
	4822 281 50188 4822 130 83863 4822 530 80699 4822 530 80701 4822 530 70629	SOLENOID DIODE E-RING 1.5MM E-RING 1.6MM PLATE 2.1X4MM	WPF, XPF, YPF WPF, XPF, YPF
133 137 143	4822 530 70628 4822 502 21608 4822 502 21607	PLATE 2.1X3.2MM AZIMUTH SCREW AZIMUTH SCREW (B)	

COMPLETE DECKS

4822 691 10436	CDS-101SPF COMPLETE
4822 691 10437	CDS-101WPF COMPLETE
4822 691 10435	CDS-101XPF COMPLETE
4822 691 10434	CDS-101YPF COMPLETE

ASSEMBLIES

A A B C	4822 276 13605 4822 276 13604 4822 276 13606 4822 404 21342 4822 256 92307	POWER SWITCH ASSY POWER SWITCH ASSY POWER SWITCH ASSY LEVER BRACKET ASSY CASSETTE HOLDER ASSY	SPF WPF, YPF XPF
D D E F	4822 528 10915 4822 528 10916 4822 214 52263 4822 466 83197	REEL BASE ASSY REEL BASE ASSY SWITCH PCB ASSY HEAD PLATE ASSY	SPF WPF, XPF, YPF
G G	4822 404 21343 4822 404 21344	F/R ARM ASSY F/R ARM ASSY	SPF, WPF XPF, YPF



Car cassette deck CDS-101xPS2



Supplement

ServiceManual

12 V → ▶

GENERAL

This supplement manual should be used together with the CDS-101 service manual 4822 725 24651.

- technical specifications
- maintenance
- checks & adjustments and
- disassembly procedure

to that manual.

The CDS-101XPS2 has the following differences with respect to the CDS-101XPS:

- additional wire cover on the lever bracket assy (pos.B); see exploded view
- a different signal connector pos. 119; see also exploded view
- diode pos. 123 is left out.

This supplement contains:

- connector layout
- an adapted exploded view and
- parts list.

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@B 4822 725 25472

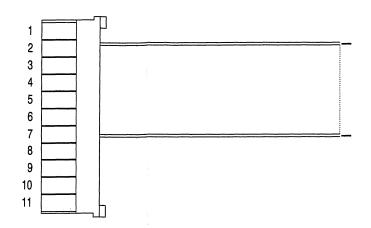


PCS 91 015 GB

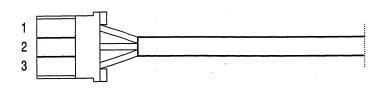




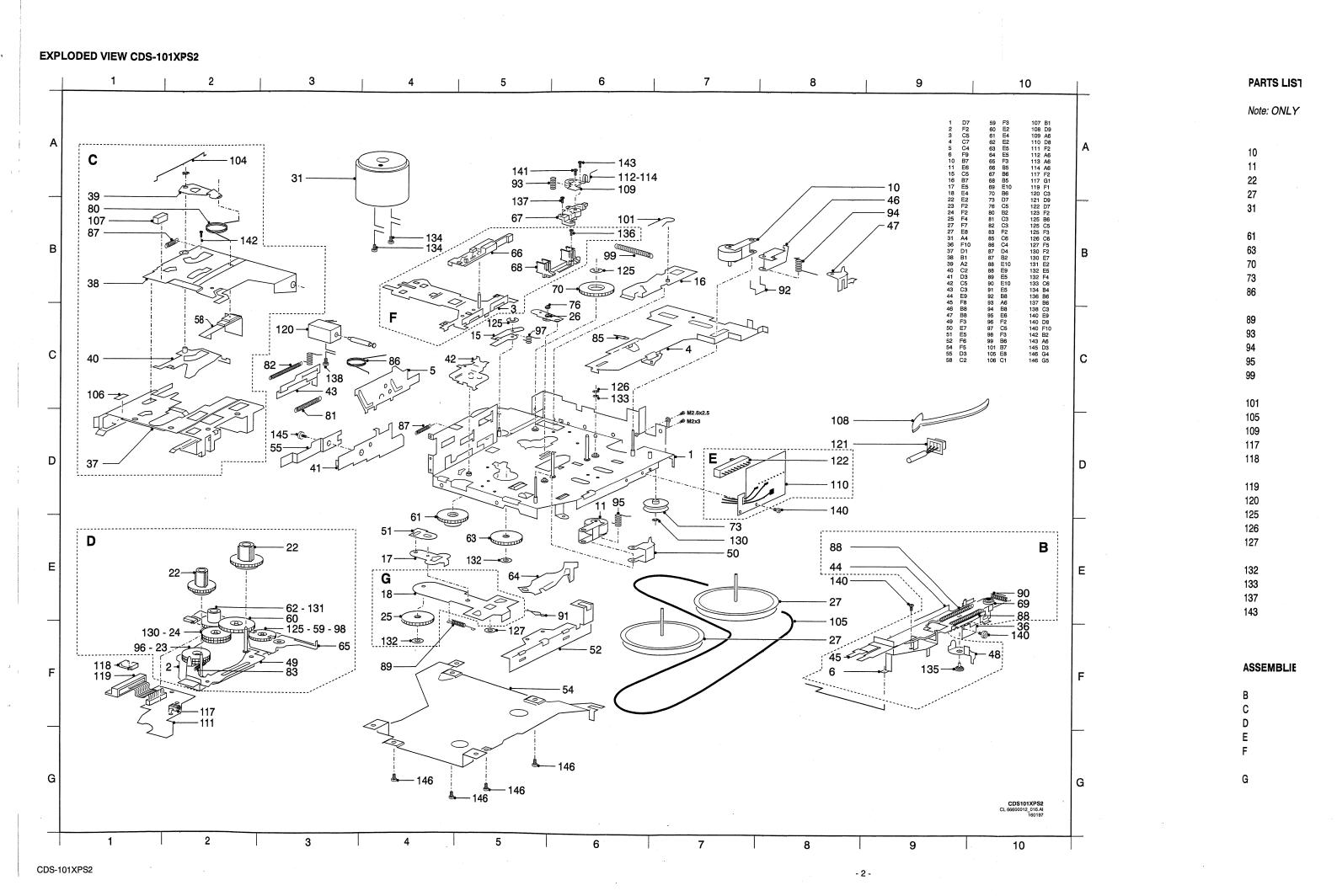
CONNECTIONS

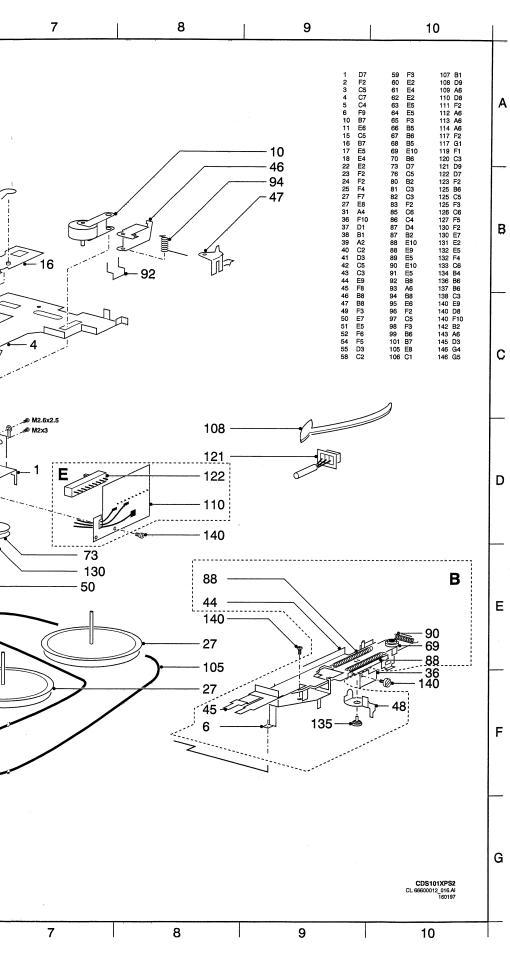


Pin no.	Wire colour	Signal
1		N.C.
2	Brown	Track switch
3	Red	GND
4	Orange	Play switch
5	Yellow	Play switch COM
6	Green	Motor +
7	Blue	Mute switch
. 8	Purple	Solenoid
9	Grey	Solenoid
10		N.C.
11		N.C.



Pin no.	Wire colour	Signal
1	Black	Common GND
2	White	Left
3	Pink	Right





PARTS LIST

Note: ONLY those position numbers mentioned here are service parts.

10	4822 528 81548	PINCH ROLLER FW
11	4822 528 81549	PINCH ROLLER REW
22	4822 528 10913	REEL ASSY
27	4822 528 60429	
31	4822 361 30456	
•	1011 00, 50, 50	
61	4822 522 33539	REDUCTION GEAR (A)
63	4822 522 33541	
70	4822 522 33542	
73	4822 528 81551	IDLER PULLEY (A)
86	4822 492 42756	
		,
89	4822 492 33485	POS. SETTER SPRING
93	4822 492 33486	ADJUSTER ARM SPRING
94	4822 492 42754	PINCH ROLLER SPG FW
95	4822 492 42755	PINCH ROLLER SPG REW
99	4822 492 33487	LOAD LEVER SPRING
	•	
101	4822 492 42757	LOAD LEVER SPRING (B)
105	4822 358 31326	BELT
109	4822 249 30219	HEAD
117	4822 276 13838	PUSH SWITCH
118	4822 276 13839	POWER SWITCH
119	4822 320 11821	11P-8P WIRE ASSY
120	4822 281 50188	SOLENOID
125	4822 530 80699	
126	4822 530 80701	E-RING 1.6MM
127	4822 532 12749	RET. RING 1.6X3.5
132	4822 530 70629	PLATE 2.1X4MM
133	4822 530 70628	PLATE 2.1X3.2MM
137	4822 502 21608	AZIMUTH SCREW
143	4822 502 21607	AZIMUTH SCREW (B)
	4822 691 10455	CDS-101XPS2 COMPLETE
ASSEMBLIES		
В	4822 404 21342	
C	4822 256 92307	CASSETTE HOLDER ASSY
D	4822 528 10916	REEL BASE ASSY
E	4822 214 52263	SWITCH PCB ASSY
F	4822 466 83197	HEAD PLATE ASSY

4822 404 21344

F/R ARM ASSY